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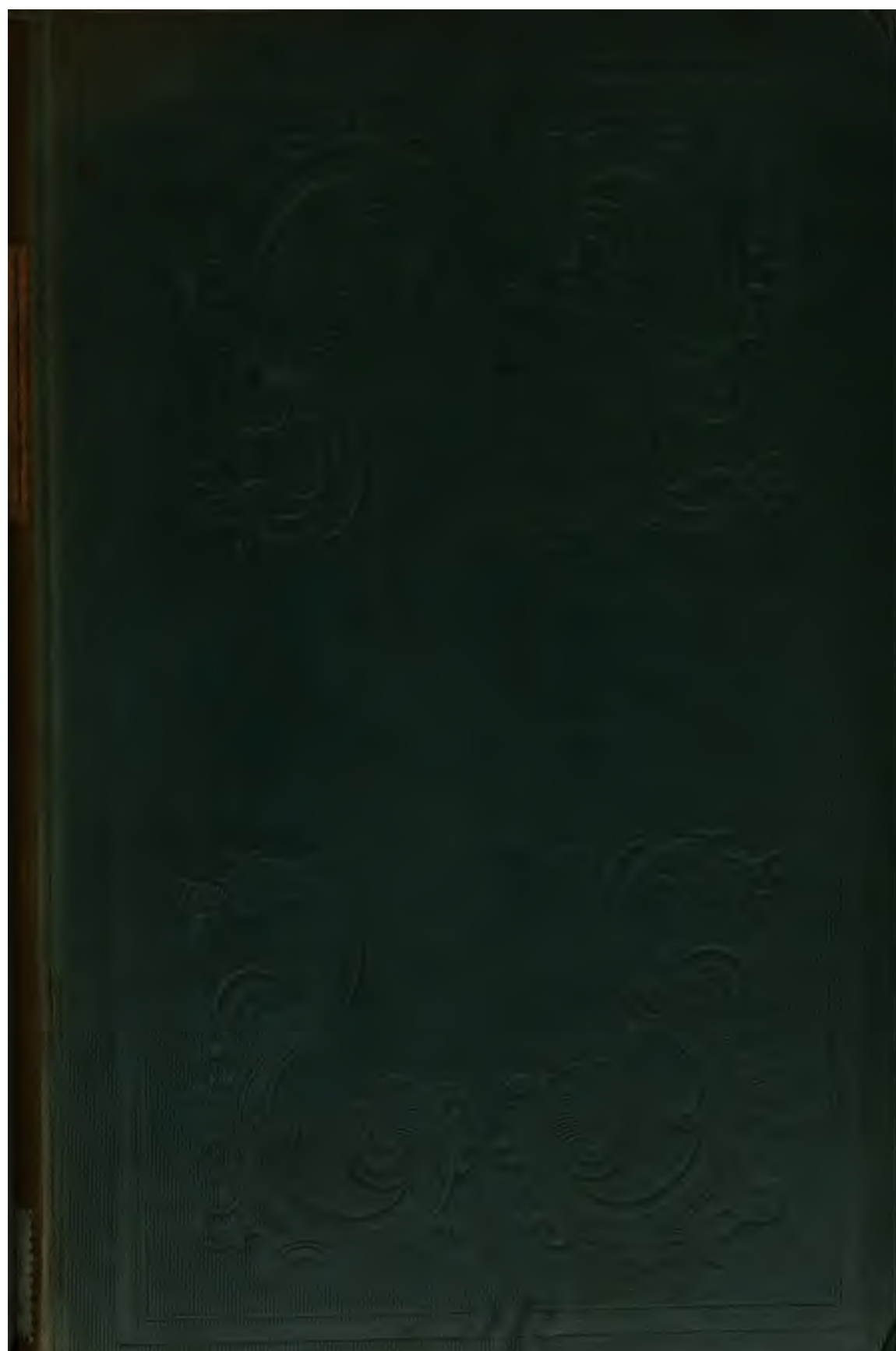
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Gough Adds Lancashire.

Pl 12.



THE

FLORA OF LIVERPOOL.

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MDCCCLI.

PREFACE.

HAVING been engaged during the last twelve or thirteen years in collecting materials for the better elucidation of the Botany of the hundred of Wirral, and the neighbourhood of Liverpool, I now lay the result before the members of the Literary and Philosophical Society. In doing so, it is with much pleasure that I acknowledge the deep debt of gratitude I owe to the numerous friends,—many of them members of this Society,—who have so liberally and promptly aided me in the undertaking, both by their advice and their contributions.

My especial thanks are due in the first place to Mr. T. B. Hall, who permitted me unlimitedly to use the valuable stores contained in his *Flora of Liverpool*, published in 1839, and which serves as the basis of the present work; and then to Messrs. Wm. Harrison and Wm. Skelhorne of the Liverpool Botanic Garden, without whose assistance this work would probably have been delayed for some time—if not altogether laid aside. To them the list of mosses is almost exclusively due; although very efficient aid has been rendered in this, as in the other departments, by Mr. Thomas Sansom, and by Mr. R. Tudor, of Bootle, whose extensive and accurate acquaintance with the natural history of this locality has been of the greatest service.

Dr. D. P. Thomson has given me the benefit of his superior knowledge of physical geography, and to him I am indebted for much of the information which is given under this head. The names of many other contributors, viz., Messrs. H. Shepherd, Brent, W. Bean, Byerley, Maughan, Dr. Woods, John Harrison, (Miner, St. Helens,) Professor Nuttall, &c., will appear in the course of the paper; and I have endeavoured, in every instance, to assign to its proper source every discovery of a new species or habitat.

PREFACE.

During the last twelve years (the period in which I was connected with the Liverpool School of Medicine, as lecturer on botany), a prize was given (and is still continued) each year for the best collection of plants made by the students within a circuit of fifteen miles of Liverpool. This is the limit within which, for the most part, our observations obtain. The collections sent in at these periods were often very valuable and extensive; and highly creditable to the industry and intelligence of the competitors. From this source much information as to the habitats, time of flowering, &c., has been obtained.

The present paper embraces the Flowering Plants, the Ferns and their allies, and the Mosses. The remaining divisions of the Flowerless Plants, viz., the Algae, Lichens, &c., are the objects of careful and persevering investigation by some of the members of this Society; and we may reasonably hope that in the course of another session, a complete list of these will be supplied, as well as a Fauna of the district, for which such ample materials are collected by competent observers.

The arrangement of the Orders, Genera, and Species are, for the most part, the same as in Hooker and Arnott's British Flora, a work which should be in the hands of every practical student of British botany.

ON THE
PHYSICAL GEOGRAPHY
OF
LIVERPOOL AND WIRRAL.

SINCE the distribution of plants depends greatly upon the physical features, geognostic relations, and climate of the locality, it is deemed expedient to notice briefly these powerful agents as introductory to a description of the Flora of Liverpool and the neighbourhood.

Liverpool is situated in N. lat. $53^{\circ} 23'$, W. long. $2^{\circ} 54'$, on the right or east side of the estuary of the Mersey, which here separates the hundred of West Derby, in Lancashire, from that of Wirral, in Cheshire. Opposite the town the estuary is navigable for vessels of the heaviest burthen, and is about one mile in breadth; but it widens more considerably as its course extends inland to Runcorn.

The town itself is completely exposed to the north and west, and occupies partly a low range of hills, and partly a small hollow or valley, formerly a marsh pool, which is bounded on the west by the Mersey, on the south by the slightly elevated ground of Toxteth-park, on the east by the broader and higher range of Everton, and on the north by an extensive range of low flat land, not many feet above the level of the sea. Of this tract the borough of Liverpool includes within its area $5002\frac{1}{2}$ statute acres. The country around is flat and somewhat undulating, bearing in that respect a close resemblance to those districts which yield supplies of coal: nevertheless,

Liverpool does not stand *upon* the coal measures. These last, however, come to the surface, and crop out at about seven or eight miles eastward of the town, near Prescot; and at about the same distance westward, near Parkgate. Thus it is reasonably supposed that the new red sand-stone of Liverpool, and of the hundred of Wirral, rests upon, and fills up a large basin formed by the coal measures. Above that most important system rests the Pæcilitic group (meaning variegated), to which the rocks under, and around the town belong. But of this group several members are wanting, the most important of which is the Permian of Murchison; a system which formed, so to speak, in the extinction of living organisms, the transition period between the palæozoic and secondary epochs. We find, however, variegated marl, and the triassic system or new red sandstone. This is the upper group of the Pæcilitic system, embracing the "Marnes irisées" and "Gres bigarré" of the French, and "Keuper" and "Bunter sandstein" of the Germans. The Muschelkalk, so abundant on the continent between the Keuper and Bunder sandstein, is entirely wanting. Above it, in geological series, though not met with here, rests the Lias.

The new red sandstone of Liverpool consists of various strata of friable sand, marl, clay, sandstone, micaceous slaty clay, and quartzose sandstone; these strata, of different thicknesses, being all regularly stratified with each other: their prevailing hue is red, though they pass through a variety of colours—from almost pure white to chocolate; they are also found yellow, blueish, green, and brown—these being often curiously intermixed, and supplying to this form of the new red sandstone the appropriate name of *variegated sandstone*. Inferior to, and outlying this new red sandstone formation, we find the coal measures, which must have been subjected to considerable disturbances anterior to the deposition of the triassic system, since the sandstone strata are unconformable with the carboniferous system. The formation of the new red

LIVERPOOL AND WIRRAL.

sandstone has doubtless arisen from the disintegration of older rocks and deposition of this alluvium in fitting localities. Though in many places local detrition may have produced the rocks in question, there is no doubt that much is due to northern drift. Large granitic boulders, characteristic of this drift, are found to the north-east of Liverpool, and probably the oxide of iron, which gives colour to the new red sandstone, has resulted from the decomposition of metamorphic rocks, of which these are remnants.*

"The sandstone, in its mineralogical character, is evidently of mechanical origin, having been a sedimentary deposition in water, under various degrees of disturbance, and consists entirely of the comminuted ingredients of older rocks. In some beds its texture consists of fine grains of quartz, cemented together by an argillaceous red oxide of iron; in others it occurs in grains of pure silex, the facets of which present a resplendent appearance on exposure to the sun. Many beds irregularly abound in nodules of indurated clay, together with a multitude of small pebbles of quartz, felspar, old red sandstone, greywacké, basalt, and granite, being portions of older rocks disintegrated by the constant attrition of water. In other beds the new red sandstone appears as a coarse quartzose conglomerate, with an argillaceous cement, containing an abundance of small nodules of a yellowish brown clay. The greater portions of these beds have disseminated particles of mica, which in some instances give the sandstone a slaty texture."

Subsequent to this formation of the new red sandstone, (with its three subdivisions or beds, namely, the Lower Red, Central Yellow or White, and the Upper Red, the whole amounting to a very considerable thickness), powerful forces

* On both sides of the Mersey that peculiar semi-metallic substance, Isereene, is met with, presenting itself as a black powder in a wave-like form on the surface of the loose sand, and being accompanied by grains of iron is highly attractable by the magnet.

from below disturbed the order, and produced those upheavings of the land which we now observe. A number of trap dykes may be observed protruding themselves through the sandstone in various parts of the neighbourhood—as at St. Domingo-lane and Mere-lane, at Everton, &c; and on the face of the rock on the north side of St. Augustine's church, there is a large fracture running eastwards, shewing an elevation of the stratum on one side of three or four feet above that on the other side of the fracture. Many similar instances are to be found in the district. Thus was formed the low range of hills (none exceeding three hundred feet above the level of the sea) in Wirral, which run nearly due north and south, and have their escarpements, with one or two exceptions, towards the west. One of the most striking exceptions is Flaybrick or Bidston-hill, where the escarpement is towards the east. The strike of the rock is towards the south-west; and, though the angle of inclination varies considerably, the general dip of the strata is from seven to eight degrees to the south-eastward. At Storeton-hill there is an anticlinal fault at the axis of elevation, and the strata dip at the same angle on each side. Thus also was formed the depression in the Mersey, the rising ground upon which a part of Liverpool stands, and the valley which runs near to Huyton, not to mention subordinate depressions and elevations.

Above the sandstone we meet with clay, forming unconformable beds, of very variable thickness, attaining along the shores of the Mersey, as at Seacombe and Egremont, a depth of above thirty feet, whilst near the Magazines it assumes a regularly stratified appearance, the lowest stratum being about fourteen feet in thickness, and the uppermost (which is much finer, and free from the large angular fragments of sandstone found in the lower stratum) being less than two feet. In some places it forms a mere superficial covering. This clay contains an innumerable quantity of rounded boulders of various sizes, from three feet in diameter to the smallest pebble. It

extends over all the flat land around Liverpool, especially northward, and is extensively diffused over Wirral, occupying all the hollows and depressions in the new red sandstone.

The coast from Hoylake, in Wirral, to Southport on the north, is low, and skirted by sand-hills and broad sands dry at low water, whilst a little inland are found peat mosses, some of considerable extent, remaining in a state of nature, and uncultivated. These contain many large trees and other remains of extensive forests. The greater portion, however, of the tract in which peat moss occurs is now in a state of cultivation, and almost daily the features of the country are becoming modified from the advancing state of agriculture. There is little doubt that at some remote period a dense forest extended itself from the borders of the Ribble southwards along the coast, occupying the tract near the estuary of the Mersey, and the northern and western parts, if not the whole, of Wirral: at the present time may be seen, along the shore of Wirral, at Leasowe, and near the mouth of the Alt, north of Liverpool, a very considerable number of trunks and roots of gigantic trees in the position in which they originally grew, whilst extensive tracts of peat are found below the sand-hills, and even down to low-water mark. There is reason to believe that there is going on along this coast a gradual subsidence of the land—(Picton); and that very considerable changes, in this as in other respects, have been effected even within the historical periods. The author now quoted, thus remarks, and probably with perfect truth, "That the sea has here gained enormously on the land, is not a matter of supposition and hypothesis, but can be proved by the testimony of many now living, and the recorded statements of others no longer in existence."

The hundred of Wirral (the history of which has been admirably described by Mr. Mortimer) contains about sixty thousand acres of land, consisting principally of clay and sand, for the most part now artificially mixed together, except in

particular districts. On this account, "the terms 'clayey loam,' and 'sandy loam,' as the sand or clay predominate, are the most accurately descriptive of the Cheshire soils. Sandy loam is met with in Wallasey, West Kirby, and the estuary of the Dee, but clay abounds in every part of Wirral. The soil is very thin in most parts, with a substratum of rummel or clay." —(Mortimer.)

"This district," remarks Mr. J. Cunningham, F.G.S., to whom we are so much indebted for our knowledge of the Geology of this locality, "has become celebrated in geological records, in consequence of impressions of a huge Batrachian, called by Professor Owen the Labyrinthodon, having been found at Storeton-hill, at a depth of between thirty and forty feet from the surface. The impressions were found in the clay, in five different superimposed beds, occupying a depth of from five to six feet, and were associated with impressions of tortoises, lizards, and crocodiles, and of that singular and extraordinary animal called the Rynchosaurus, which Professor Owen has shown, was a creature having the body of a reptile, with the beak and feet resembling those of a bird. This animal was pronounced by that distinguished comparative anatomist, to be one of the most extraordinary that he had ever investigated.

"These remains, however interesting to the geologist, were superseded by the novel discovery of impressions of rain-drops which were found in three different beds. These indicated different meteorological conditions of the atmosphere; one showing a heavy shower, accompanied with a high wind, the two others, from the smallness of the pit marks, and the more superficial depths to which the drops have penetrated the clay, were apparently more gentle in their character. The impressions of gigantic *Fucoides* have also been found in the rock, and at different depths: one at Woodside was exposed for several years on the margin of Wallasey Pool, now occupied by the new docks. Several were found on a bed in Storeton

LIVERPOOL AND WIRRAL.

quarry, at a depth of about fifty feet from the surface, one of which measured upwards of thirty feet in length, and covered an area of about three hundred superficial feet."

In the observations upon the climate of Liverpool we avail ourselves of the results obtained by Mr. Hartnup, at the Liverpool Observatory, between the years 1846-50 inclusive, seeing that no series of observations can exceed these in minuteness and accuracy; besides, they are reduced to a common standard.

During the years referred to, the mean reading of the barometer, corrected for index error and reduced to 32° Fahr., was 29·860 inches, the extremes being 30·862 inches and 28·382 inches, respectively on February 11th, 1849, and December 6th, 1847. The instrument not being self-registering these extremes were obtained at the ordinary times of reading off; and that they cannot be implicitly trusted in, is proved by the fact stated by Mr. Hartnup, that at 10 p.m. on the latter occasion the mercury fell to 28·154 inches. This, however, is of little moment in the present inquiry, as it is the mean pressure more than extremes, which seldom occur, that co-operates in exerting an influence upon the local Flora.

Temperature is a much more powerful agent than atmospheric pressure, and the mean reading of the thermometers, corrected for index errors and diurnal range, was 49·9° Fahr.; the highest of a self-registering thermometer being 82·3°, on the 19th June, 1846, and the lowest of a self-registering instrument being 20·8°, on the 29th January, 1848. The mean daily range of temperature was 8·8°, and the extreme range for the five years amounted to 61·5. The least mean range takes place in January, when it amounts to 5·7°; and the maximum occurs in May and June, when it equals 11·8°.

The mean temperature of the dew-point, or point at which invisible moisture is deposited from the atmosphere, was 44·9°, i.e., 5° below the mean temperature of the air. The mean elastic force of vapour, or the average amount of water dif-

fused, was 0·324 inch. The mean weight of vapour contained in a cubic foot of air was 3·69 grains avoird., and an additional fraction of 0·67 grain was required to saturate the same bulk of air, i.e., to exhaust its power of suspending vapour at a certain temperature. Complete saturation being counted unity, the mean humidity of the atmosphere was 0·852. The average quantity of vapour mingled with the air would have produced a precipitation of 4·48 inches of rain, had it been all deposited at once upon the earth. The mean annual fall of rain was 28·05 inches, and the number of rainy days was 178. The greatest fall was 31·41 inches, in 1847; and the least 21·46 inches, in 1850. The amount of cloud will be represented by 6·7 of the whole sky—ten being complete obscuration: the largest mean amount was 7·2, in 1850; and the smallest 6·3, in 1849.

The influence of the sea in moderating the ordinary extremes of temperature must not be forgotten. The open coast too, exerts its power upon the Flora, for where bold and rugged rocks present a barrier to the waves, the wind carries the spray inland, to the destruction of certain plants and trees artificially planted, and to the prevention of the natural growth of others.

Liverpool, when considered in comparison with the more inland localities, exhibits a much *less variable* and *more limited* range of temperature. At Warrington, distant inland only eighteen miles from Liverpool, the thermometer has been observed as low as 13° Fahr., whilst at Derby it has sunk to 1° below zero. The climate also is milder. It appears from the Manchester meteorological tables that Liverpool has an average annual superiority in this respect over Crumpsall of about 2°; and the difference is still more marked when compared with other places at no great distance inland.

In conclusion it may be observed, that a local Flora is subject to changes slow but certain. Habitats are forsaken under the influence of cultivation and the increase of buildings and

LIVERPOOL AND WIRRAL.

population, not to mention the over-zeal of the practical botanist. But other stations are met with for the natural tenants of the soil; and occasionally the labour of the botanist is further rewarded by the discovery of plants formerly unknown in the locality. All these causes are in operation here. With increasing commerce, land has been built upon or converted into docks, which was wont in former days to supply plants for the *hortus siccus*.

“ Nature never did betray
The heart that loved her; 'tis her privilege
Through all the years of this our life, to lead
From joy to joy: for she can so inform
The mind that is within us, so impress
With quietness and beauty, and so feed
With lofty thoughts, that neither evil tongues,
Rash judgments, nor the sneers of selfish men,
Nor greetings where no kindness is, nor all
The dreary intercourse of daily life,
Shall e'er prevail against us, or disturb
Our cheerful faith, that all which we behold
Is full of blessings.”

WORDSWORTH.

ARRANGEMENT ADOPTED
IN THE
LIVERPOOL FLORA.

I.—DICOTYLEDONOUS, OR EXOGENOUS PLANTS.

1. THALAMIFLORE, petals several, distinct, and the stamens hypogynous.
2. CALYCIFLORE, corolla and stamens perigynous, or inserted into the calyx.
 - A. *Polypetalous*, petals distinct.
 - B. *Monopetalous*, petals united, and forming as it were a monopetalous corolla.
3. COROLLIFLORE, corolla of one piece, hypogynous, stamens epipetalous or hypogynous.
 - A. *Hypogynous*, stamens free from the corolla.
 - B. *Epipetalous*, stamens inserted upon the corolla.
4. MONOCHLAMYDEE, perianth single or wanting.

II.—MONOCOTYLEDONOUS, OR ENDOGENOUS
PHANEROGAMOUS PLANTS.

1. PETALOIDEE, flowers having a single perianth, or if destitute of one, naked.
 1. Ovary adnate with the tube of the perianth.
 2. Ovary free, not adnate with the perianth.
2. GLUMACEE, flowers destitute of a perianth, but inclosed within imbricated alternate chaffy scales or bractees.

III.—ACOTYLEDONOUS, OR FLOWERLESS PLANTS.

ABBREVIATIONS.

- ⊙ Annual. ♂ Biennial. 2 Perennial. 1 Arboreous or Shrubby.
- D. C. or De Cand. De Candolle,—*Prodromus Systematis Naturalis*.
- E. B. or Eng. Bot. Sowerby and Smith's English Botany.
- Hook. Hooker and Arnott's British Flora.
- Huds. Hudson's *Flora Anglica*.
- J. S. in Herb. The late Mr. John Shepherd's Herbarium in the Liverpool Botanic Garden.
- Juss. Jussieu,—*Genera Plantarum*.
- Lindl. Dr. Lindley,—*Vegetable Kingdom, &c.*
- L. or Linn. Linnæus,—*Genera Plantarum*.
- R. Br. or Br. Dr. Robert Brown.
- Sm. Sir J. E. Smith's English Flora.
- Sw. Swartz.
- With. Withering's Arrangement of British Plants.
- W. & N. Wejke and Nees.
- W. H. William Harrison,—Liverpool Botanic Garden.
- W. S. William Skelhorne,—Liverpool Botanic Garden.

CLASS I.

DICOTYLEDONOUS, OR EXOGENOUS PLANTS.

SUB-CLASS I. THALAMIFLORÆ. (*Ord. i—xviii.*)

ORD. I. RANUNCULACEÆ. Juss. *The Crowfoot Family.*

1. CLEMATIS. Linn. *Traveller's Joy.*
Polyandria Polygna. L.

1. C. VITALBA. L. (Common T.) June—August. ½
We insert this on the authority of Mr. John Harrison, of St. Helens, who found it growing in Ditton Marsh, in 1850. There is a specimen also in the Herb. of the Bot. Gar., stated to have been found in Cheshire, in 1801, by J. Clough.

2. THALICTRUM. Linn. *Meadow Rue.*
Polyand. Polygn. L.

1. T. MINUS. L. (Lesser M.) June, July. ¼
Shore of Dee, at Parkgate, plentiful,—W.S. Little Hilbre Island. Southport, (Guide to Southport.) ?
2. T. FLAVUM. L. (Common M.) June, July. ¼
Ditches about Hoylake, plentiful. Ditch beyond Croxteth Hall, on the road to Knowsley Old Chapel,—W.H. Little Crosby, abundant. Near Speke Hall,—W.S. Hale Point. Altcar Marsh. Near Southport. Sefton Meadows,—Mr. Bean.

THE FLORA OF LIVERPOOL.

3. ANEMONE. Linn. *Anemone. Polyand. Polygn. L.*

1. A. NEMOROSA. L. (Wood Anemone.) March—June.

In the open fields, and by the sides of ditches, at Fazakerley, abundant,—W.H. In a wood by the road side near Roby Hall, plentiful,—J.S. Gilbrook, Bromborough, Bebington, Eastham, &c. woods, abundant. Dingle, Childwall.

In the above named wood, near Roby Hall, occurs the variety *A. nemorosa flor. pleno*, mingled with the single flowered species,—W.H.

4. ADONIS. Linn. *Pheasant's Eye. Polyand. Polygn. L.*

1. A. AUTUMNALIS. L. (Corn Adonis, or Pheasant's Eye.)

Sept. and Oct. ☉

Found occasionally in corn fields.

5. RANUNCULUS. Linn. *Crowfoot, Spearwort.*

Polyand. Polygn. L.

1. R. AQUATILIS. L. (Common Water C.) Spring and Summer. 24

Very common in ponds and ditches.

2. R. CIRCINATUS. Sibth. (Rigid-leaved Water C.) June—Sept. 24

Common in ponds and ditches about Woodside and Bidston, and other parts of Wirral.

3. R. HEDERACEUS. L. (Ivy-leaved C.) Throughout the summer. 24

Common in ditches, wet places, and where water has stood during winter.

4. R. LENORMANDI. Schultz. June, July. 24

Ditches about Wavertree,—Wm. Bean.

5. R. LINGUA. L. (Great Spearwort.) June—Sept. 24

Ditches in Little Crosby, frequent. Formby Marsh, frequent,—W.S. Southport. Litherland, near the railway station,—R. Tudor.

6. R. FLAMMULA. L. (Lesser S.) June—August. 24

In ditches and wet places, very common.

7. R. FICARIA. L. (Pilewort C., lesser Celandine.) March—May. 24

In wet shady places, meadows, hedge banks, &c., abundant.

Curculio dorsalis is found upon this plant; likewise a small parasitic fungus, *Oecidium Ficariae*, covering the leaves with bright orange. The Brimstone Butterfly (*Gonepteryx Rhamni*) is frequently seen upon it.

THE FLORA OF LIVERPOOL.

8. *R. AURICOMUS*. L. (Wood C., golden-haired C.) April,
May. 24
Woods near Croxteth Hall, very abundant,—W.H. Woods
at Deysbrook, West Derby, abundant,—J. S. Gillbrook,
now nearly destroyed. Bidston Woods. Near Wavertree.
9. *R. SCELERATUS*. L. (Celery-leaved C.) May—Sept. 24
Sides of muddy pools and ditches, very common.
10. *R. ACRIS*. L. (Upright meadow C.) June, July. 24
Meadows, pastures, and road sides, very frequent.
11. *R. REPENS*. L. (Creeping C.) May—August. 24
Pastures and cultivated ground, very frequent.
12. *R. BULBOSUS*. L. (Bulbous C.) May, June. 24
In meadows and pastures, frequent.
Orthosia Pistacina (Veiny Chestnut) feeds upon this plant, perhaps the only Lepi-
dopterous larva that is found on the Ranunculaceæ.
13. *R. HIRSUTUS*. Curt. (Pale hairy C.) June—Oct. ☉
Brickfields near Wallasey Pool, common. Sandy fields in
Formby, frequent,—W.S. In fields near Bidston new
road. Crosby,—J.S. in *Herb. of the Bot. Gard.* Garston,
and near Parkfield,—H. Shepherd. Southport.
14. *R. ARVENSIS*. L. (Corn C.) June, July. ☉
Lane near Bidston stone quarry, abundant,—W.S. Rabbit
warren, Crosby. Fields near Gillbrook. Southport.
15. *R. PARVIFLORUS*. L. (Small flowered C.) May—
August. ☉
Sandy lanes about Hoylake, plentiful,—W.S. Corn fields
near Upton. Sandy corn fields, Crosby,—J.S. in *Herb. of
the Bot. Gard.* West Kirby,—T. Sansom.
16. *R. GRAMINEUS*. L. (Grassy C.) May, June. 24
Stated, in "Robinson's Southport," to grow in that locality;
but this is certainly a mistake. Probably *R. flammula* was
mistaken for *R. gramineus*.

6. *CALTHA*. Linn. *Marsh Marygold*.
Polyand. Polygn. L.

1. *C. PALUSTRIS*. L. (Common M.) March—June. 24
In ditches and by the sides of ponds, frequent.
The larva of *Lampronia Calthella* (the Small Gold) feeds upon the leaves.
"The rare *Chrysomela Hannoveriana* may be found in the flowers in May,"
occasionally.

THE FLORA OF LIVERPOOL.

7. AQUILEGIA. Linn. *Columbine*.

Polyand. Pentagyn. L.

1. A. VULGARIS. L. (Common C.) May—August. 24

Woods and hedge banks, occasionally in the neighbourhood, but in all cases the outcast of a garden.

"The larva of *Polia Chi* (the July Chi) feeds on the plant."

ORD. II. BERBERIDACEÆ. Vent. *The Barberry Family*.

1. BERBERIS. Linn. *Barberry. Hexand. Monogyn.* L.

1. BERBERIS VULGARIS. L. (Common B.) May, June. 12

Knowsley woods. Hedges at Aigburth, Brombora', &c., plentiful, but planted.

The larva of *Anticlea Berberata* (the Cloaked Carpet) feeds on this shrub.

ORD. III. NYMPHÆACEÆ. *The Water Lily Family*.

1. NYMPHÆA. Linn. *White Water Lily*.

Polyand. Monogyn. L.

1. N. ALBA. L. (Great W.) July, August. 24

In ponds and pits, very common.

The larva of *Hydrocampa Potamogeta* (the Brown China Mark) feeds on this plant.

2. NUPHAR. Sm. *Yellow Water Lily*.

Polyand. Monogyn.

1. N. LUTEA. Sm. (Common Y.) June, July. 24

In a pond between the large stone quarry and the "Little Britain" public house, Knowsley, abundant. In an old pit between the tan yard and the railway, near the Old Swan, —W.H. In the river Alt, between Kirby and Formby, common. In watery places on Formby Marsh, plentiful, —W.S. Southport. Near New Ferry, —H. C. Watson. Pits near Hoylake, —Miss E. Potts.

THE FLORA OF LIVERPOOL.

ORD. IV. PAPAVERACEÆ. JUSS. *The Poppy Family.*

1. PAPAVER. Linn. *Poppy. Polyand. Monogyn. L.*

1. P. ARGEMONE. L. (Long prickly-headed P.) May—
July. ☉

Corn fields and sandy places, frequent.

2. P. DUBIUM. L. (Long smooth-headed P.) May—
July. ☉

Corn fields and sandy places, frequent.

3. P. RHÆAS. L. (Common Red P.) Summer. ☉

Corn fields and sandy places, frequent.

4. P. SOMNIFERUM. L. (White P.) July. ☉

Corn fields at Sefton, 1848,—W. Bean.

2. GLAUCIUM. Tourn. *Horned Poppy.*

Polyand. Monogyn. L.

1. G. LUTEUM, Scop. (Yellow H.) June—October. ☉

Near the Collieries, Parkgate shore,—J.S., Miss Potts.
Abundant between Parkgate and Hoylake, along the shore.
Plentiful near the Grange landmark, Formby,—W.S.
Southport.

3. CHELIDONIUM. Linn. *Celandine.*

Polyand. Monogyn. L.

1. C. MAJUS. L. (Common C.) May—Oct. 24

Hedge banks inland. Near Roby village,—W.H. Near
Thornton,—W.S. Walton,—R. Tudor. Near Aigburth,
Garston, and at West Derby. In lanes near Eastham.
Southport. Road sides near Mosley Hill,—W. Bean.

ORD. V. FUMARIACEÆ. De Cand.

The Fumitory Family.

1. FUMARIA. Linn, *Fumitory. Diadelph. Hexand. L.*

1. F. CAPREOLATA. L. (Rampant F.) May—Sept. ☉

Hedges, corn fields, gardens, and road sides, frequent.

THE FLORA OF LIVERPOOL.

2. *F. OFFICINALIS*. L. (Common F.) Throughout the Summer. ☉
Cornfields, gardens, hedges, and road sides, frequent.

2. *CORYDALIS*. De Cand. *Corydalis*.
Diadelph. Hexand. L.

1. *C. LUTEA*. Lindl. (Yellow C.) May—Aug. 24
On an old brick wall at Broad Green, probably an outcast from a garden,—W. H.
2. *C. CLAVICULATA*. D. C. (White Climbing C.) June—July. 24
In a wood behind Bidston Hall, near a spot where a quantity of large furze is growing, plentiful,—W. H. Near Gill Moss Chapel,—W. S. Roadsides at Bidston and Upton, and Seaforth. Crosby,—R. Tudor. Formby. Southport,—F. P. Marrat.

ORD. VI. CRUCIFERÆ. JUSS.
The Cruciferous Family.

SUB-ORD. I. PLEURORRHIZÆ.

1. *BARBAREA*. Br. *Winter Cress*.
Tetradynamia Siliquosa. L.

1. *B. VULGARIS*. Br. (Bitter W., Yellow Rocket.) May—August. 24
Hedge banks and waste places frequent.
2. *B. PRÆCOX*. Br. (Early W., Belleisle Cress.) April—Oct. 3
Sandy fields in Bootle and Linares, frequent,—W. S.

2. *TURRITIS*. Linn. *Tower Mustard*.
Tetradyn. Siliquosa. L.

1. *T. GLABRA*. L. (Long-podded T.) May—July. ☉
Said in "Robinson's Southport" to grow in that locality.—
This requires confirmation.

THE FLORA OF LIVERPOOL.

3. ARABIS. Linn. *Rock Cress. Tetradyn. Siliquosa. L.*

1. A. HIRSUTA. Br. (Hairy R.) June—August. ♂
Sand hills in New Brighton, Crosby and Formby, abundant.

4. CARDAMINE. Linn. *Bitter Cress.*
Tetradyn. Siliquosa. L.

1. C. AMARA. L. (Large flowered B.) April—June. 24
In a brook which crosses the Tarbuck road, about a mile beyond Gateacre. In a ditch about fifty yards beyond the "Rocket" public house, Oak Vale, near Broad Green.—W.H. In Fazakerley, by the side of a footpath which commences by Walton Church,—W.S. Meadows near West Derby. Melling, in Ditches,—T. Sansom. Southport.
2. C. PRATENSIS. L. (Common B., Lady's Smock or Cuckoo-flower.) April—June. 24
Moist meadows and ditch sides, abundant.
VAR. with double flowers on the sand hills beyond New Brighton,—T. Sansom.
3. C. HIRSUTA. L. (Hairy B.) March—August. ☉
Moist shady places, and dry banks, walls, &c., abundant.
VAR. b. C. SYLVATICA. Link. (Great Hairy C.)
April, May. ☉
Woods and shady hedge-banks, occasionally.

5. NASTURTIUM. Br. *Water Cress. Yellow Cress.*
Tetradyn. Siliquosa. L.

1. N. OFFICINALE. Br. (Water Cress.) May—July. 24
Ponds and ditches, very common.
2. N. TERRESTRE. Br. (Marsh Y.) June—Sept. 24
Brick-fields, Toxteth Park. Bootle,—R. Tudor. Woodside. Brick-fields north of Liverpool, abundant,—W.S. Southport.

6. ARMORACIA. Rupp. *Horse-Radish. Water-Radish.*
Tetradyn. Siliquosa. L.

1. A. AMPHIBIA. Roch. (Great W.) June—Sept. 24
Ditches between Leasowe Castle and Bidston, very abundant,—W.S. Crosby Marsh,—H. Shepherd. Formby. Southport.

THE FLORA OF LIVERPOOL.

2. *A. RUSTICANA*. Baumg. (Common H.) May. 24
Found occasionally near dwelling houses, as at Poulton, Bidston, Southport, &c., but not native.
7. *COCHLEARIA*. Linn. *Scurvy Grass*.
Tetradyn. Siliculosa. L.
 1. *C. OFFICINALIS*. L. (Common S.) May—August. ☉ or 24
Shores of the Mersey, of the sea, and of Wallasey and Bromboro' pools, abundant.
 2. *C. DANICA*. L. (Danish S.) May, June. ☉
Hilbre Island, abundant,—W.S. Parkgate,—Miss E. Potts. Southport.
 3. *C. ANGLICA*. L. (English S.) May—July. ☉
Hilbre Island. Wallasey and Bromboro' Pools, plentiful. Southport.
Koniga maritima. Br. Has been found on the sand hills, near Waterloo, but under doubtful circumstances,—W.S.
8. *DRABA*. Linn. *Whitlow Grass*. *Tetradyn. Siliculosa*. L.
 1. *D. VERNA*. L. (Common W.) March—June. 24
On banks, rocks, old walls, &c., very frequent.
9. *THLASPI*. Linn. *Penny Cress*. *Tetradyn. Siliculosa*. L.
 1. *T. ARVENSE*. L. (Field P. or Mithridate Mustard.) June, July. ☉
Near the "Old Hut," at Hale,—W.S. Kirby, near the "New Inn,"—R. Tudor.
10. *TEESDALIA*. Br. *Teesdalia*. *Tetradyn. Siliculosa*. L.
 1. *T. NUDICAULIS*. Br. (Naked-Stalked T.) May—July. ☉
On dry banks near Storeton, Bidston, Tranmere, Bootle, &c., frequent. Formby,—J.S. Near sea shore, common,—W.S. Southport.
11. *CAKILE*. Gärtn. *Sea Rocket*. *Tetradyn. Siliculosa*. L.
 1. *C. MARITIMA*. Willd. (Purple S.) July, August. ☉
Sea shore, New Brighton, Bootle, Formby, &c., abundant. Southport.

THE FLORA OF LIVERPOOL.

SUB-ORD. II. NOTORHIZEÆ.

12. HESPERIS. Linn. *Dame's Violet*.

Tetradyn. Siliquosa. L.

1. H. MATRONALIS. L. (Common D.) May—July. ♀

Plentiful about Clegg's pits, Allerton; though probably outcasts from gardens. These pits are rich in mosses, ferns, and other interesting plants,—W.H.

13. SISYMBRIUM. Linn. *Hedge-Mustard*.

Tetradyn. Siliquosa. L.

1. S. OFFICINALE. L. (Common H.) June, July. ☉

Waste places and road sides, very abundant.

2. S. SOPHIA. L. (Five-leaved H. or Flax-weed.) June—August. ☉

Abundant in various places in Wirral, near the sea. Bidston, New Brighton, Hoylake, Leasowe Castle, &c. Sand hills, Crosby and Formby, common,—W.S. Bootle, —R. Tudor. Southport.

3. S. THALIANUM. Hook. (Common Thale Cress.) Spring and Autumn. ☉

Walls, dry banks, gravelly soils, &c., common.

14. ALLIARIA. Adans. *Garlic Mustard*.

Tetradyn. Siliquosa. L.

1. A. OFFICINALIS. D.C. (*Erysimum alliaria.* L.) (Com. G., Jack-by-the-Hedge, or Sauce Alone.) June, July. ♂

Hedge banks and waste places, common.

The larva of *Curculio Alliaria* feeds upon this plant.

15. ERYSIMUM. Linn. *Treacle Mustard*.

Tetradyn. Siliquosa. L.

1. E. CHEIRANTHOIDES. L. (Worm-seed T.) June—August. ☉

Southport,—(G.S.) In a lane near Sefton,—W. Bean.

THE FLORA OF LIVERPOOL.

16. SUBULARIA. Linn. *Awl Wort.*
Tetradyn. Siliculosa. L.

1. S. AQUATICA. L. (Awl Wort.) August. 24
Near Allerton. ? (Specimen from H.S. 1812.)

17. CAPSELLA. De Cand. *Shepherd's Purse.*
Tetradyn. Siliculosa. L.

1. C. BURSA-PASTORIS. D.C. (Common S.) The whole
Summer. ☉
Corn fields, waste places, &c., very abundant.
A small white parasitic fungus, *Uredo Thlaspi*, is frequently found on this plant.

18. LEPIDIUM, Linn. *Pepper Wort.*
Tetradyn. Siliculosa. L.

1. L. LATIFOLIUM. L. (Broad-leaved P.) July, August. 24
Hoylake, plentiful.
2. L. DRABA. L. (Whitlow P.) June, July. 24
Banks of the Dee, near Queen's Ferry,—Dr. Wood.
3. L. RUDEBALE. L. (Narrow-leaved P.) May, June. ☉
Banks of the Dee, near Queen's Ferry,—Dr. Wood.
4. L. CAMPESTRE. Br. (Common Mithridate P.) May—
August. ☉
Corn fields, waste places, road sides, &c., abundant.
5. L. SMITHII. Hook. (Smooth field P.) April—Sept. 24
Borders of hedges and fields at Eastham and Rock Ferry.

19. SENEBIERA. De Cand. *Wart-cress.*

1. S. CORONOPUS. D.C. (Common W., Swine's Cress.)
Waste ground, road sides, &c., common.
2. S. DIDYMA. D.C. (Lesser W.) July—Sept. ☉
Plentiful in sandy lanes near Hoylake,—W.S., F.P. Marrat.

THE FLORA OF LIVERPOOL.

SUB-ORD. III. ORTHOPLOCEÆ.

20. BRASSICA. Linn. *Cabbage, Turnep, Navew.*

Tetradyn. Siliquosa. L.

1. B. OLERACEA. L.

Southport,—“Guide to Southport,”—but not confirmed,—J.D.

2. B. NAPUS. L. (Rape or Cole Seed.) May, June. ♂

Corn fields and waste ground, frequent.

3. B. RAPA. L. (Common T.) April—July. ♂

Corn fields and waste places, frequent.

4. B. CAMPESTRIS. L. (Common Wild N.) June, July.

⊙ or ♂

Corn fields and waste grounds, frequent. Formby sand hills, abundant, but apparently sown as food for the rabbits,—W.S., W.H.

5. B. MONENSIS. Br. (Isle of Man C.) June—August. 4

Sand hills at New Brighton, (Bootle,—R. Tudor,) Crosby, Formby, &c., abundant.

21. SINAPIS. Linn. *Mustard.*

Tetradyn. Siliquosa. L.

1. S. NIGRA. L. (Common Black M.) July—Sept. ⊙

Waste places, hedges, and borders of fields, abundant.

2. S. ALBA. L. (White M.) June, July. ⊙

Waste places, hedges, &c., abundant.

3. S. ARVENSIS. L. (Wild M. Charlock.) May—August. ⊙

Corn fields, &c., very common.

4. S. TENUIFOLIA. Br. (*Diplotaxis tenuifolia*. D.C.) (Wall Rocket.) June—Sept. 4

A specimen was sent to me, in 1850, by Mr. J. Harrison, said to be gathered at Neston.

22. RAPHANUS. Linn. *Radish.*

Tetradyn. Siliquosa. L.

R. RAPHANISTRUM. L. (Wild R. or Jointed Charlock.)

Summer and Autumn. ⊙

Common in corn fields in Wirral, and the neighbourhood of Liverpool.

THE FLORA OF LIVERPOOL.

ORD. VII. RESEDACEÆ. De Cand.

The Mignonette Family.

1. RESEDA. Linn. *Dyer's Rocket, Mignonette.*

Dodecand. Trigyn. L.

1. R. LUTEOLA. L. (Common D., Yellow Weed or Weld.)

June, July. ☉

Common in hedges about Leasowe,—W.H. Abundant at Bidston, and on Hoylake, Crosby, and Formby sand hills.

2. R. FRUTICULOSA. L. (Shrubby Base D.) June. ♂ or ♀

On the sand hills near Bootle Land Marks,—R. Tudor. Sparingly on sand hills beyond New Brighton. Said to grow at Southport,—“Guide to Southport,” by Glazebrook. Bootle, near the “Rimrose,”—R. Tudor.

ORD. VIII. VIOLACEÆ. De Cand.

The Violet Family.

1. VIOLA. Linn. *Violet. Pentand. Monogyn. L.*

1. V. HIETA. L. (Hairy V.) April, May. ♀

Near Eastham, on the road to Chester,—H. Shepherd.

2. V. ODORATA. L. (Sweet V.) March, April. ♀

In a wood by the road side opposite Roby Hall,—W.S., W.H. Lane near West Derby. Wavertree road, near the Quarry. Speke,—A. Stewart. Birkenhead Church Yard (introduced by a lady),—H. C. Watson.

Triphana Fimbria (broad bordered yellow underwing) and *Acotia Præcox* (the Portland Moth) feeds on this species.

3. V. PALUSTRIS. L. (Marsh V.) May—July. ♀

Bickerstaffe Moss, near the “Level Crossings” station,—W.S. Rainford Moss. Crosby Marsh.

4. V. CANINA. L. (Gerard's or Dog V.) May—Sept. ♀

Woods, banks, and dry pastures, very frequent.

Argynnis Paphia (Silver-washed Fritillary) and *A. Aglaia* (Dark Green Fritillary) feed on this plant.

5. V. PUMILA. Vill. (*V. Flavicornis. Sm.*) (Dillenius' V.)

April—Sept. ♀

On a bank near Crosby rabbit warren, 1821,—J.S. in Herb. On New Brighton and Crosby sand hills, frequent.

(See Watson's Cybele, pp. 178—180.)

THE FLORA OF LIVERPOOL.

6. *V. TRICOLOR*. L. (Pansy V. or Heart Ease.) The whole summer. ☉, ♂, or ♀
 Very common on the sand hills at New Brighton, Bootle, Crosby, &c.
- VAR. b. *ARVENSIS*. Murr. (Cornfield Pansy.) Petals shorter than the calyx. April—Sept. ☉
 Corn fields, waste places, and by road sides, abundant.
 "The beautiful Caterpillar of *Argynnis Adippe* (the High-brown Fritillary) feeds on this species."
7. *V. LUTEA*. Huds. (Yellow Mountain V. or Yellow Pansy.) May—Sept. ♀
 Stated by Mr. Glazebrook, the author of the "Guide to Southport," and by Mr. Henry Aughton, to grow in that neighbourhood, but I have never been able to meet with any one else who has seen a specimen in that locality.
8. *V. LACTEA*. Sm. (Cream Coloured or Haller's V.) May ♀
 Sand hills at New Brighton,—T. Sansom. See *Phytologist*, vol. 3, p. 47.
9. *V. CURTISII*. Forst. May, June. ☉, ♂, or ♀
 Sand hills at New Brighton,—T. Sansom. See *Phytologist*, vol. 3, p. 46; and Watson's *Cybele Britannica*, vol. i., p. 188.

ORD. IX. DROSERACEÆ. De Cand.
The Sun-dew Family.

SUB-ORD. I. DROSERÆ.

1. *DROSER*A. Linn. *Sun Dew. Pentand. Monogyn.* L.
1. *D. ROTUNDIFOLIA*. L. (Round-leaved S.) July, August. ♀
 Common on Bidston, Oxtan, and Heswall hills. On Sutton, Simmons' wood, and Formby Mosses,—J.H., W.H., and W.S. Southport. Chat Moss,—R. Tudor.
2. *D. LONGIFOLIA*. L. (Long-leaved S.) July, August. ♀
 Common in the same situations as the above. Chat Moss,—R. Tudor.
3. *D. ANGLICA*. L. (Great S.) July, August. ♀
 Simmons' wood Moss, but not so plentiful as the two preceding species,—W.H. Chat Moss,—R. Tudor.

THE FLORA OF LIVERPOOL.

SUB-ORD. II. PARNASSIÆ.

2. PARNASSIA. Linn. *Grass of Parnassus*.
Pentand. Trigyn. L.

1. P. PALUSTRIS. L. (Common G.) August—October. 4
Common in bogs, and wet places amongst the sand hills
on the shores of the Mersey. New Brighton, Hoylake,
Seaforth, Formby, Southport, &c.

ORD. X. POLYGALACEÆ. Juss. *The Milkwort Family*.

1. POLYGALA. Linn. *Milkwort. Diadelph. Octand.* L.

1. P. VULGARIS. L. (Common Milkwort.) June, July. 4
Very common in dry barren places inland, where it is of a
deep blue or of a delicate pink colour, and on the sand
hills on the coast, where it is more frequently pale blue or
white.

ORD. XI. CARYOPHYLLACEÆ. Juss.
The Chickweed Family.

SUB-ORD. I. SILENEÆ.

1. DIANTHUS. Linn. *Pink. Decand. Digyn.* L.

1. D. ARMERIA. L. (Deptford P.) July, August. ☉
Fields near Gill Moss Chapel. Frequent in sandy fields
about Bootle,—W.S. Abundant in a corn field near
Sutton.

2. D. DELTOIDES. L. (Maiden P.) July, August. 4
Near Wallasey Church,—J.S. in *Herb.* Near Wallasey
Pool,—H. Shepherd. Hale Point,—J.H.

2. SAPONARIA. Linn. *Soapwort. Decand. Digyn.* L.

1. S. OFFICINALIS. L. (Common S.) July, August 4
Abundant about Hoylake,—W.S. Hedge banks, road sides,
and sandy places about Bidston, Crosby, Formby, South-
port, &c.

THE FLORA OF LIVERPOOL.

3. *SILENE*. Linn. *Catchfly*. *Decand. Trigyn.* L.

1. *S. INFLATA*. Sm. (Bladder Campion.) June—August. 24
Pastures and road sides. Frequent about Bidston. Near Wallasey Stone Quarry,—W.S. With double flowers on a grassy bank near the Rimrose Hotel. Crosby, Formby and Southport.
2. *S. MARITIMA*. With. (Sea Campion or C.) June—August. 24
Very abundant on the banks of the Dee, and on Hilbre Island. Sparingly on a sandy spot on the shore between Traamere and Rock Ferry.
3. *S. ANGLICA*. L. (English C.) June—November. ☉
In a narrow lane near Bidston, and on the sand hills,—H. C. Watson. Heswall Hills,—Miss Potts. Crosby sand hills. Southport,—G.S.
4. *S. QUINQUEVULNERA*. L. (Variegated C.) June—Nov. ☉
Corn fields about Crosby, 1801,—J.S. *in Herb.* Hoylake,—J.S. *in Herb.*, 1829. Sandy lanes about Hoylake, but not common. In a fir wood near Bidston, very dwarfish,—W.S.

4. *LYCHNIS*. Linn. *Campion*. *Lychnis*.
Decand. Pentagyn. L.

1. *L. FLOS-CUCULI*. L. (Meadow L. or Ragged Robin.)
May, June. 24
Meadows and moist pastures, frequent. A white variety is abundant on Crosby Marsh,—H. Shepherd.
2. *L. VESPERTINA*. Sibth. (White C.) June—Sept. ♂ or 24
Under hedges and in grass fields, very common.
3. *L. DIURNA*. Sibth. (Red C.) June, July. 24
Damp hedge banks and woods, very common.
The larva of *Miselia compta* (the Marbled Coronet) and of *Hadana Cucubali* (the Campion) feed on this species.

5. *AGROSTEMMA*. Linn. *Cockle*. *Decand. Pentagyn.* L.

1. *A. GITHAGO*. L. (Corn C.) June to August. 24
In corn fields, common.

THE FLORA OF LIVERPOOL.

SUB-ORD. II. ALSINEÆ.

6. SAGINA. Linn. *Pearl-wort. Tetrand. Tetragyn.* L.

1. S. PROCUMBENS. L. (Procumbent P.) May—Sept. 24

Waste places, walls, and banks, very common.

2. S. APETALA. L. (Annual small-flowered P.) May—Sept. ☉

In dry sandy places, very common.

3. S. MARITIMA. Don. (Sea P.) May—Sept. ☉

Damp spots near Bootle and New Brighton, very abundant. Near Wallasey Pool and Poulton, abundant.

4. S. SUBULATA. Wimm. (Awl-shaped P.) June—August 24

Heswall Hills,—F. Brent.

5. S. NODOSA. Mey. (Knotted P.) *Decand. Pentagyn.* L. July, August. ☉

Frequent on wet, sandy, and marshy spots at Bootle, Seaforth, Formby, Southport, &c. Also at Bidston, New Brighton, &c.

7. HONCKENYA. Ehrh. *Sea-Purslane.*

Decand. Trigyn. L.

1. H. PEPLOIDES. Ehrh. (Ovate-leaved Sea-Purslane.)

June, July. 24

Common on the sandy sea shore of the Mersey. Hoylake, Southport, &c.

8. SPERGULA. Linn. *Spurrey. Decand. Pentagyn.* L.

1. S. ARVENSIS. L. (Corn S.) July, August. ☉

Fields, road sides, and waste places, common.

VAR. b. S. PENTANDRA. Sm. (Smooth-seeded C.)

Sandy ground about Liverpool,—J.S. *in Herb.* Abundant on the sea coast.

Cassida Spurgule is found on this plant.

9. SPERGULARIA. Pers. (Sandwort-Spurrey.)

Decand. Trigyn. L.

1. S. RUBRA. St. Hil. (Field S.) June, July. ☉

Sand hills on the coast, frequent; and in dry barren situations inland.

THE FLORA OF LIVERPOOL.

2. *S. MARINA*. Camb. (Sea-side S.) June, July. ☉
 Frequent on the sea coast, and in the muddy inlets of the Mersey, as Wallasey and Bromboro' Pools, &c.
Spergula and *Spergularia* are referred by Hooker and Arnott to the order *Paronychiaceae*.

10. *ARENARIA*. Linn. *Sandwort*. *Decand. Trigyn.* L.

1. *A. SERPYLLIFOLIA*. L. (Thyme-leaved S.) June—Aug. ☉
 Sand hills on the coast, frequent; and in dry waste situations inland.
 2. *A. TRINERVIS*. L. (Three-nerved S.) May, June. ☉
 In woods and shady places, frequent.
 3. *A. TENUIFOLIA*. L. (Five-leaved S.) May, June. ☉
 This plant is introduced into Mr. Aughton's List of Southport Plants, but I am not aware of any one else having met with it in this locality.

11. *STELLARIA*. Linn. *Stitchwort*. *Decand. Trigyn.* L.

1. *S. MEDIA*. With. (Common Chickweed or S.) Almost the whole year. ☉
 By road sides and waste places, abundant.
 2. *S. HOLOSTEA*. L. (Greater S.) April—June. 4
 Woods and hedges, frequent.
Dermestes flavescens feeds on both petals and stamens.
 3. *S. GRAMINEA*. L. (Lesser S.) May—August. 4
 Pastures, fields, and heaths, frequent.
 4. *S. ULIGINOSA*. Murr. (Bog S.) May, June. ☉
 In ditches and watery places, common.
 5. *S. GLAUCA*. With. (Glaucous Marsh. S.) May—July 4
 There are specimens of this plant from Mosslake fields in the Herbarium of the Botanic Garden, marked erroneously *S. glauca*, (being *S. uliginosa*.) *S. glauca* is also included in Aughton's List of Southport Plants, but this habitat requires confirmation.

12. *MÆNCHIA*. Ehrh. *Mænchia*. *Tetrand. Tetragyn.* L.

1. *M. ERECTA*. Sm. (Upright M.) May, June. ☉
 Abundant near the Bidston Telegraph Station; also near New Brighton, Leasowe, &c.

THE FLORA OF LIVERPOOL.

13. CERASTIUM. Linn. *Mouse-ear Chickweed.*

Decand. Pentagyn. L.

1. C. VULGATUM. L. (Broad-leaved M.) April—Sept. ☉
Fields, pastures, roofs, and road sides, common.
2. C. VISCOSUM. L. (Narrow-leaved M.) Spring and Summer. ☉
In similar situations to those above, but more common.
3. C. SEMIDECANDRUM. (Little M.) March—May. ☉
Frequent on the sand hills on the coast.
4. C. TETRANDEM. Cust. (Four-cleft M.) May—July. ☉
Common on the sand hills at New Brighton, Hoylake, &c.; also at Bootle, Crosby, Formby, Southport, &c. By the road sides and banks at Woodside, Oxtan, &c.

VAR. C. ATROVIRENS. Bab. March, April. ☉

There is a variety occasionally met with amongst the sand hills on the sea coast, which nearly answers to the description of *C. atrovirens*, as given by Babington in his "Manual of Br. Botany." (See Watson's *Cybele Britannica*, pp. 229, 230.)

"The following larvæ feed upon the different species of *Cerastium*:—*Arctia Caja* (the Great Tiger Moth), *Arctia Villica* (the Cream-spot Tiger Moth), *Triphona Ianthina* (the Yellow Underwing), *Graphiphora C. nigrum* (Setaceous Hebrew Character), *Mythimna grisea* (Bright-eyed Clay Moth), *Mythimna conigera* (Brown-line Bright-eye Moth), and *Mythimna turca* (the Double Line)."

ORDER XII. LINACEÆ. De Cand.

The Flax Family.

1. LINUM. Linn. *Flax. Pentand. Pentagyn.* L.

1. L. USITATISSIMUM. L. (Common F.) June, July. ☉
Corn fields near the canal at Litherland, plentiful,—W.S. Alien.
2. L. PERENNE. L. (Perennial Blue F.) June, July. 4
Waste ground at Woodside, Bootle, &c., but an outcast from a garden.
3. L. ANGUSTIFOLIUM. Huds. (Narrow-leaved pale F.) May—Sept. 4
Hill near the obelisk, Allerton,—J.S. in *Herb.* Bootle,—R. Tudor. Abundant in corn fields near Barnston, Cheshire,—W.S. Plentiful by hedge sides and sandy pastures between Tranmere, Bebbington and Oxtan. Very abundant by the side of some pits near Sir John Tobin's lodge, on the New Bidston road.

THE FLORA OF LIVERPOOL.

4. *L. CATHARTICUM*. L. (Purging Flax.) June—Sept. ☉
 Dry pastures, common on both sides of the Mersey.
2. *RADIOLA*. Gmel. *Flax-seed. Tetrand. Tetragyn.* L.
1. *R. MILLEGRANA*. Sm. (Thyme-leaved F.) July, Aug. ☉
 In Simmons-wood Moss, common; also on hills between Parkgate and West Kirby,—W.S. Plentiful on sandy banks and moist gravelly soils in various parts of Wirral, as at Bidston, Oxtan, Heswall, &c. Southport.

ORD. XIII. MALVACEÆ. *The Mallow Tribe.*

1. *MALVA*. Linn. *Mallow. Monadelph. Polyand.* L.
1. *M. SYLVESTRIS*. L. (Common M.) May—Sept. 4
 Waste places and way sides, common.
 A white variety is found at Hoylake by J.S.
Apion Malva, *A. osurum* *A. ancum*, and *Haltica rufipes*, inhabit the different species. The larva of *Larantia cervinata* (the Mallow), feeds on them.
2. *M. ROTUNDIFOLIA*. L. (Dwarf M.) June—Sept. 4
 Waste places and way sides, common. Bidston, Hoylake, Fazakerley, &c.,—W.S., W.H. Formby, Southport, &c.
3. *M. MOSCHATA*. L. (Musk M.) July, August. 4
 Banks near Otterspool, Aigburth, but not common,—W.S. Abundant in a field at Little Sutton. Not now to be found at Woodside. Southport,—Aughton.

2. *ALTHÆA*. Linn. *Marsh Mallow.*
Monadelph. Polyand. L.

1. *A. OFFICINALIS*. L. (Common M.) Sept., Oct. 4
 Southport, according to the "Guide to Southport," but I have never met with any one who has seen it grow there; and it is judiciously excluded from Mr. Aughton's List of Plants.

ORD. XIV. TILIACEÆ. *The Lime Family.*

1. *TILIA*. Linn. *Lime. Polyand. Monogyn.* L.
1. *T. PARVIFOLIA*. Ehrh. (Small-leaved L.) July, Aug. ½
 In Woolton Park,—W.S. In young plantations between Croxtheth and Knowsley Halls,—W.H. Occasionally met with in other places (woods, hedges, &c.) near Liverpool and Wirral, but in all these cases not to be considered indigenous.

THE FLORA OF LIVERPOOL.

2. T. EUROPEA. L. (Common L. or Linden Tree.)

July. ½

In similar situations to the above and under similar circumstances.

3. T. GRANDIFOLIA. L. (Broad-leaved Downy L.) June,

July. ½

In similar situations and circumstances to the above.

"The Lime supports the larvæ of *Smerinthus Tilia* (the Lime Hawk), *Lophopteryx Camolina* (the Cock's Comb Prominent), *Petasia Cassinea* (the Sprawler), *Endromis Versicolora* (the Kentish Glory), *Pætilocampa Populi* (the December Moth), *Eriogaster lanestris* (the Small Egger), *Hypogymna dispar* (the Gipsy), *Lencoma vau-nigra* (the Black V.), *Erithosia Stabialis* (the Quaker), *Xylina petrifacata*, *Acronycta Alni* (the Alder), and *Acronycta Psi* (the Dagger)."

ORD. XV. HYPERICACEÆ. *The Tutsan Family.*

1. HYPERICUM. Linn. *St. John's Wort.*

Polyadelph. Polyand. L.

1. H. ANDROSEMUM. L. (Tutsan.) June—August. ¼

Plentiful in a plantation near Upton village. Near Brom-boro' pool, rare,—W.S. Near the "Old Hut," Hale,—W.H. Near Hale village, by the side of a grassy lane leading to Hale wood,—J.S. On the left-hand side of the old Bidston road, about two miles from Woodside. In a lane near Claughton Hall. Sparingly between Seacombe and Bidston,—H.C.W. in *New Bot. Guide*. Between Hooton and Eastham, a little above the river,—H. Shepherd.

2. H. PERFORATUM. L. (Common perforated St. J.) July—September. ¼

Woods, moist hedges, &c., common.

3. H. DUBIUM. Leers. (Imperforate St. J.) July, Aug. ¼

Plentiful in a hedge by the side of a canal near Litherland tan yard,—W.S. Near Speke Hall and Hoylake,—J. Shepherd in *Herb*.

4. H. QUADRANGULUM. L. (Square-stalked St. J.) July. ¼

Moist shady places, common.

5. H. HUMIFUSUM. L. (Trailing St. J.) July. ¼

Heathy gravelly pastures and meadows, common.

6. H. PULCHRUM. L. (Small upright St. J.) June, July. ¼

Very common in shady situations about Woodside, Seacombe, Hoylake, &c. Also frequent on the Lancashire side of the Mersey.

THE FLORA OF LIVERPOOL.

7. *H. ELODES*. L. (Marsh St. J.) July—Sept. 24
In a pond at Litherland. Crosby,—Dr. Bostock *in With.*
Near Garston; and in Cheshire not uncommon,—
H. Shepherd.
8. *H. CALYGINUM*. L. (Large-flowered St. J.) July—Sept. 24
Has been naturalized in a wood near Hale.

ORDER XVI. ACERACEÆ. Juss.
The Maple Family.

1. *ACER*. Linn. *Maple*. *Octand. Monogyn.* L.
1. *A. PSEUDO-PLATANUS*. L. (Greater M. or Scyamore.)
May, June. ½
In plantations, hedges, &c., but not indigenous.
2. *A. CAMPESTRE*. L. (Common M.) May, June. ½
Common in similar situations to the above, but not indigenous.
- The black blotches which are found on the leaves, are caused by the minute fungus
Erineum acerinum.
- The Maple supports the larvæ of *Lophopteryx cuculla* (the Maple Prominent),
Ptilophora variegata, *Apetala aceris* (the Scyamose Tussock).

ORD. XVII. GERANIACEÆ. Juss.
The Geranium Family.

1. *GERANIUM*. Linn. *Crane's-bill*.
Monadelph. Decand. L.
1. *G. SANGUINEUM*. L. (Bloody C.) July. 24
North shore of Liverpool,—Dr. Bostock *in With.* (not
found there now,—R. Tudor.) Amongst the sand hills
and the banks of the Mersey near New Brighton. Plenti-
ful in a hedge behind the "Half-way House" and near the
Hotel, Egremont. Abundant along the Dee shore, near
Parkgate.
2. *G. PHÆUM*. L. (Dusky C.) May, June. 24
Has become naturalized, from the gardens, in many locali-
ties near Liverpool. Southport, &c.

THE FLORA OF LIVERPOOL.

3. *G. PRATENSE*. L. (Blue Meadow C.) June—Sept. 24
Formerly, but not now, in a field near Seaforth,—R. Tudor.
Sutton, near St. Helens,—J.H.
4. *G. ROBERTIANUM*. L. (Stinking C. or Herb-Robert.)
May—Sept. ☉
Abundant on hedge banks and waste places.
Dothidea Robertiani is frequently found upon this plant.
5. *G. MOLLE*. L. (Dove's-foot C.) April—August. ☉
Dry pastures and waste places, common.
6. *G. DISSECTUM*. L. (Jagged-leaved C.) May—Sept. ☉
Allerton,—J.S. in *Herb*. Common in corn fields in Wirral,
and on the Lancashire side of the Mersey.
7. *G. COLUMBINUM*. L. (Long-stalked C.) June, July. ☉
Allerton,—J.S. in *Herb*. In a lane leading to Heswall,
Miss Potts. Road side near Bidston,—W. Bean.

2. *ERODIUM*. L'Herit. *Stork's-bill*.
Monadelph. Pentand. L.

1. *E. CICUTARIUM*. Sm. (Hemlock S.) May—Sept. ☉
Very abundant on the sand hills near the shore on both
sides of the Mersey, and also in sandy places inland.
2. *E. MOSCHATUM*. Sm. (Musky S.) June, July. ☉
Eccleston,—J.H. Hedge bank on the north side of
Grange Hill near West Kirby, rare,—W.S.
3. *E. MARITIMUM*. Sm. (Sea S.) May—Sept. 24
Is mentioned in "Turner and Dillwyn's Bot. Guide," as
growing near Parkgate, but I am not aware of any one
having seen it grow there lately.

ORD. XVIII. OXALIDACEÆ. De Cand.
The Wood-Sorrel Family.

1. *OXALIS*. Linn. *Wood-Sorrel. Decand. Pentagyn.* L.
1. *O. ACETOSELLA*. L. (Common W.) April, May. 24
Very common in woods and hedge banks near Liverpool
and in Wirral.

THE FLORA OF LIVERPOOL.

2. O. CORNICULATA. L. (Yellow Procumbent W.) June—September. ☉

Is stated by J.H. to be naturalized near St. Helens; and it has been gathered near Knowsley, but in both cases it clearly has its origin from some neighbouring gardens.

SUB-CLASS II. CALYCIFLORÆ. (Ord. xix—xliv.)

A. *Corolla Polypetalous.* (Ord. xix—xxxvii.)

ORD. XIX. CELASTRACEÆ. R. Brown.

1. EUONYMUS. Linn. *Spindle Tree.* *Pentand. Monogyn.* L.

1. E. EUROPEUS. L. (Common S.) May, June. 24

Hedges near Gill Moss, &c., but probably planted there, —W.S.

This is one of the four plants that the *Acherontia Atropos* (the Death's Head) has been found upon in this country. The other plants are—the *Solanum Dulcamara* (Bitter Sweet), *S. tuberosa* (Potato), and *Jasminum officinale*. The two last plants, of course, not indigenous.

ORD. XX. RHAMNACEÆ. JUSS.

The Buckthorn Family.

1. RHAMNUS. Linn. *Buckthorn.* *Pentand. Monogyn.* L.

1. R. FRANGULA. L. (Alder B.) May, June. 24

Plentiful in woods and on hedge banks on the south side of Simmons-wood Moss,—W.H. Donswood near Sutton,—J.H.

"The larvæ of *Polyommatus Argiolus* (the Azure Blue) and that of *Gonepteryx Rhamni* (the Brimstone Butterfly), feed on this plant." The minute fungus *Æcidium Rhamni* is also found upon it.

THE FLORA OF LIVERPOOL.

ORDER XXI. LEGUMINOSÆ. Juss.

The Bean and Pea Family.

TRIBE I. GENISTEÆ. Stamens Monadelphous.

1. ULEX. Linn. *Furze. Monadelph. Decand. L.*

1. U. EUROPEUS. L. (Common F. Whin or Gorze.)

Early Spring and Summer. 24

Very common on sandy and heathy soils, road sides, &c.

On the Whin are occasionally found the larva of *Polyommatus Argiolus* (the Azure Blue), also *Euthemonia Russula* (the Clouded Buff).

2. U. NANUS. Forst. (Dwarf F.) July—November. 24

Bidston Heath, abundant. Gravelly lanes, Allerton, Mere Green, Walton,—W.H. Everton. Heswall Hills.

3. U. GALLII. Planch. Spring and Autumn. 24

Sand hills, New Brighton,—T. Sansom. Bidston Heath.

2. GENISTA. Linn. *Green-Weed. Monadelph. Decand. L.*

1. G. TINCTORIA. L. (Dyer's G.) June—August. 24

Very common in pastures in Wirral, and about Bootle, Formby, Southport, Crosby, &c. Fazakerley,—W.H.

"*Apion Genista*, and the larva of *Hipparchus Cythisaria* (the Grass Emerald or Green Carpet) feed on this species."

2. G. ANGLICA. L. (Needle G. or Petty Whin.) May,

June. 24

Plentiful on the west side of Heswall Hills, about a mile from Gayton Hall,—W.S. Near Eastham,—H. Shepherd. In a field near Bidston Stone Quarry, and on Seaforth Common, sparingly. Southport.

3. SAROTHANMUS. Wimm. *Broom.*

Monadelph. Decand. L.

1. S. SCOPARIUS. Wimm. (Common B.) April—July 24

Dry hills, borders of fields and shady places, occasionally. On the Railway banks between Broad Green and Roby, abundant. Also on Billinge Hill,—W.S.

"The larvæ of *Polyommatus Argus* (the Studded Blue), *Thecla Rubi* (the Green Hair Streak), *Calocampa exoleta* (the Sword Grass), *Hadena contigua* (the Beautiful Brocade), *Mamestra Pisi* (the Broom), *Dasychira fascelina* (Dark Tussock), *Speranza limbaria* (the Frosted Orange), also, *Chrysomela litura*, *occellata*, and *oblongoguttata*, *Lampyrus chlorocephala*, *Apion Neclonopum*, and rarely *Apion Spartii* feed upon this species. The blossoms yield an abundant supply of honey for bees."

THE FLORA OF LIVERPOOL.

4. ONONIS. Linn. *Rest-Harrow. Monadelph. Decand. L.*

1. O. ARVENSIS. L. (Common R.) July—September. 4
Borders of fields, way-sides, and sand hills along the coast, common.

VAR. b. O. ANTIQUORUM. L.

Common in similar situations to the above. Little Sutton, &c.

There is a white variety found plentifully on the banks of the Mersey, near Egremont. The plant is very variable indeed in its characters, being erect or procumbent, spinous or unarmed, &c.

Polia tincla (the Silvery Arches), and the larva of *Heliotis marginata* (the Bordered Sallow), feed on this species.

5. ANTHYLLIS. Linn. *Kidney-Vetch.*

Monadelph. Decand. L.

1. A. VULNERARIA. L. (Common K. or Lady's Fingers.)
June—September. 4
Common on the sand hills along the coast.

TRIBE II. TRIFOLIEÆ. Stamens Diadelphous.

Leaves 3—5 foliolate.

6. MEDICAGO. Linn. *Medick. Diadelph. Decand. L.*

1. M. SATIVA. L. (Purple M. or Lucerne.) June, July. 4
Occasionally in pastures and corn fields, but not wild.
2. M. LUPULINA. L. (Black M. or Non-such.) May—
August. ☉
Abundant in waste and cultivated grounds.
3. M. MACULATA, Sibth. (Spotted M.) May—Aug. ☉
Broad Green Railway banks, rare,—W.H.

7. MELILOTUS. Tourn. *Melilot. Diadelph. Decand. L.*

1. M. OFFICINALIS. L. (Common Yellow M.) June—
August. ♂ or 4
Common in sandy fields at Formby, and on the clay banks along the shore at Speke and Garston,—W.S. Common on the Railway banks between Broad Green and Roby,—W.H. By the side of a footpath near Wallasey Pool,—J.S. In a hedge near Little Sutton, plentiful.

THE FLORA OF LIVERPOOL.

2. *M. VULGARIS*. Willd. (White M.) July, Aug. ♂ or ♀
A single specimen has been found lately (in an old habitat)
in the brick fields along the north shore by W.S.
8. *TRIGONELLA*. Linn. *Fenugreek*.
Diadelph. Decand. L.
1. *T. ORNITHOPODIOIDES*. D.C. (Bird's-foot F.) June,
July. ☉
"Waste ground along the Parkgate shore,"—Miss E. Potts.
9. *TRIFOLIUM*. Linn. *Trefoil-Clover*.
Diadelph. Decand. L.
1. *T. REPENS*. L. (White T. or Dutch C.) May—Sept. ♀
Meadows and pastures, abundant.
2. *T. SUBTERRANEUM*. L. (Subterranean T.) May, June. ☉
Banks of the Dee, near Parkgate,—Miss E. Potts; and
West Kirby,—Mr. Byerley.
3. *T. OCHROLEUCUM*. L. (Sulphur-coloured T.) June—
August. ♀
Fazakerley Railway banks,—T. Sansom.
4. *T. PRATENSE*. L. (Common Purple C.) May—Sept. ♀
Meadows and pastures, frequent.
5. *T. MEDIUM*. L. (Zigzag T.) June—September. ♀
Clay banks, shores of the Mersey, very common. Banks
between New Brighton and Egremont; New Ferry, Brom-
boro', and Eastham. Aigburth and Speke, &c.
6. *T. ARVENSE*. L. (Hare's foot T.) July, August. ☉
Common about Bootle, Wallasey, New Brighton, Heswall
(T.S.), &c., and on the sand hills along the coast. Crosby,
Formby, Southport.
7. *T. SCABRUM*. L. (Rough rigid T.) May—Aug. ☉
"Waste ground along the Parkgate shore,"—Miss E. Potts.
8. *T. FRAGIFERUM*. L. (Strawberry-headed T.) July,
August. ♀
Common along the north shore, Bootle, &c. Bidston
Marsh, Hoylake, &c. Southport.
9. *T. PROCUMBENS*. L. (Hop T.) June—August. ☉
Dry pastures and borders of fields, very common.

THE FLORA OF LIVERPOOL.

10. T. MINUS. Relh. (Lesser-yellow T.) June, July. ☉

Dry pastures and road sides, frequent.

11. T. FILIFORME. L. (Slender Yellow T.) June, July. ☉

Dry pastures and road sides, frequent.

"The different species of Trefoil afford nourishment and protection to numerous insects. *Polyommatus albus* (Small Blue), *Polyommatus Argus* (Silver-studded Blue), *Melitæa Cinzia* (the Glanville Fritillary), *Anthrocera Meliloti Trifolii* and *Loti* (the Burnets), *Lasiocampa Trifolii* (the Grass Egger), *Dasychira fascelina* (the Dark Tussock), *Orthosia Litura* (the Brown-spot Pinion), *Mamestra suasa* (the Dog's tooth), *Acontia solaris* (the Black Kidney), *Euclidia glyphica* (the Burnet), *Apion assimile* devours the leaves and heads of *Trifolium ochroleucum*. *Apion meliloti* is found on *T. melilotum*. The larva of *Apion flavipes* devours the heads of *T. repens*; and *Apion flavifemoratum* is highly destructive to clover crops. *Apion Loti*, *Apion vicinum*, &c., also are found in this genus."

10. LOTUS. Linn. *Bird's Foot Trefoil*.

Diadelph. Decand. L.

1. L. CORNICULATUS. L. (Common B.) June—Aug. 24

Very abundant in pastures and way sides.

VAR. TENUIFOLIUS. (*L. tenuis*. Kit.) July, Aug. 24

Occasionally met with on the sand hills on both sides of the Mersey,

The larva of *Thymele tegea* (the Dingy Skipper), is found on this plant; also *Thrips Physapus* and *Apion Loti*. The minute gall-gnat, *Tipula loti*, occasionally feeds on it, and greatly metamorphoses its appearance. It is likewise a favourite food of the caterpillar of the white butterfly, *Leucophasia sinapis*.

2. L. MAJOR. Scop. (Narrow-leaved B.) July, Aug. 24

Common in moist shady places, and by ditches.

TRIBE III. HEDYSARÆÆ. Stamens Diadelphous.

"Leaves Pinnate. Tendrils O. Legume indehiscent, divided transversely into one or more one-seeded cells."

11. ORNITHOPUS. Linn. *Bird's Foot*.

Diadelph. Decand. L.

1. O. PERPUSILLUS. L. (Common B.) May—July. ☉

Common on both sides of the Mersey. Bidston, Oxtun, Wallasey, Bootle, Simmons-wood, Formby, Southport, &c.

THE FLORA OF LIVERPOOL.

TRIBE IV. VICIEÆ. Stamens Diadelphous.

"Leaves Pinnate or apparently simple, usually with tendrils. Legume 2-valved, several seeded, the suture not introflexed."

12. VICIA. Linn. *Vetch, Tare. Diadelph. Decand. L.*

1. V. LATHYROIDES. L. (Spring V.) April, May. ☉

Common about Bootle, Waterloo, Little Crosby, Formby, and Southport. Also at New Brighton, the Magazines, and Wallasey.

2. V. SATIVA. L. (Common V.) June. ☉

Cultivated grounds and meadows, frequent.

Livia Cracca frequents this species. Bees are fond both of the flowers and young spotted leaves.

3. V. ANGUSTIFOLIA. Roth. (Narrow-leaved crimson V.)

June. ☉

Dry pastures and sandy pastures, frequent.

4. V. SEPIUM. L. (Bush V.) June—August. 4

Woods and shady places, frequent.

"*Apion (Curculio) subulcatum* is found upon it, and the seeds are generally devoured by the larvæ of a species of *Attelabus*, probably *A. punctiger*,—*Apion punctifrons*, (Kirby), is said to resort to this vetch only."—WITHERING.

5. V. CRACCA. L. (Tufted V.) June—August. 4

In hedges and shady places, frequent.

6. V. TETRASPERMA. Lois. ERVUM. Linn. (Slender T.)

June, July, ☉

Corn fields, hedges occasionally. Crosby, Formby, &c.

7. V. HIRSUTA. Koch. ERVUM. Linn. (Hairy T.) June,

July. ☉

Corn fields and hedge sides, frequent. On both sides of the Mersey. Bromboro', Oxtou, &c. Crosby, Formby, Broad Green, Wavertree, Gill Moss, Melling, &c.

13. LATHYRUS. Linn. *Vetchling, Everlasting Pea.*

Diadelph. Decand. L.

1. L. PRATENSIS. L. (Meadow V.)

Very common in hedges, and road sides.

"*Apion Ervi* and *Lathyri*, according to Kirby, are found upon this species; also the caterpillar of the white butterfly, *Leucophasia Sinapis*, feeds upon it."—WITH.

THE FLORA OF LIVERPOOL.

2. *L. SYLVESTRIS*. L. (Narrow-leaved E.) June, August. 24
Sutton Bridge, Frodsham,—John Harrison, 1850.

14. *OROBUS*. Linn. *Bitter Vetch*. *Diadelph. Decand.* L.

1. *O. TUBEROSUS*. L. (Tuberous B.) May—July. 24
Abundant in woods and shady places.

ORDER. XXIV. ROSACEÆ. Juss.
The Rose Family.

SUB-ORD. I. AMYGDALÆÆ. "Carpel solitary, superior. Style 1.
Calyx-tube deciduous. Stipules free."

1. *PRUNUS*. Linn. *Plum and Cherry*.
Icosand. Monogyn. L.

- 1 *P. COMMUNIS*. Huds. (Common P.) April, May. 24

- a. *P. SPINOSA*. L. (Black Thorn or Sloe.)
Common in hedges and bushy places.

- b. *P. INSITITIA*. L. (Wild Bullace Tree.)
Oxton. Tarbuck, very common,—W.H.

- c. *P. DOMESTICA*. L. (Wild Plum Tree.)
In hedges occasionally, but not native. Bootle, Aigburth,
Childwall, &c.

"*Puccinia Pruni* will frequently be found scattered, in minute yellow spots, on the under side of the leaves, especially during autumn. *Xyloma rubrum* pervades the substance to both sides; and *Sphoria Prunastri* may be observed on the decaying branches about the month of April."—WITH.

"The Black Thorn affords food and shelter to numerous insects; amongst others, *Pieris Cratagi* (Black-veined White), *Vanessa polychloros* (the large Tortoise-Shell), *Thecla Betula* (the Brown Hair Streak), *Thecla Pruni* (the Black Hair Streak), *Thecla Spini* (Pale Brown Hair Streak), *Episema caeruleocephala* (Figure of 8 Moth), *Trichiura Cratagi* (the Pale Oak Egger), *Eriogaster lanestris* (Small Egger), *Gastropacha Quercifolia* (the Lappet Moth), and *Orgyia antiqua* (the Vapourer), &c., &c."

2. *P. PADUS*. L. (Bird-Cherry.) May. 24
Woods and hedges on both sides of the Mersey. Bootle,
Aigburth, Childwall. Eastham, &c., but probably not
native.

"*Erincum Padi* in distinct roundish patches, whitish when young, changing to orange and deep brown, may be observed on the leaves."—WITH.

THE FLORA OF LIVERPOOL.

3. *P. CERASUS*. L. (Wild C.) May. 24

Seacombe, by pits,—H. C. Watson. Bebbington and Bromboro' Pool, common,—W.S. Plentiful in pits in Edge Lane, Hall Park,—W.H.

"*Livia Cerasi* may be detected on this tree."—WITE.

SUB-ORD. II. ROSEÆ. "Carpels not adhering to the calyx-tube. Stipules united to the petiole."

TRIBE 1. SPIRÆIDÆ. Petals several. Fruit, a ring of follicles not inclosed within the calyx-tube.

2. SPIRÆA. Linn. *Spiræa*, *Dropwrt*, or *Meadow-sweet*.
Icosand. Pentagyn. L.

1. *S. ULMARIA*. L. (Queen of the Meadows.) July. 24

Very common by the side of ponds and ditches and in moist meadows.

"*Sphinx ocellata* and *Filipendula* feed on this plant."—WITE.

TRIBE 2. POTENTILLIDÆ. "Calyx-tube short and nearly flat, not enclosing the fruit. Petals several. Achenes or drupes five or more upon a common flat or convex receptacle."

3. GEUM. Linn. *Avens*. *Icosand. Polygyn.* L

1. *G. URBANUM*. L. (Common A.) June. 24

Woods and hedges, frequent.

2. *G. RIVALE*. L. (Water A.) May—July. 24

Meadows below Childwell Abbey.

3. *G. INTERMEDIUM*. Ehrh. June, July. 24

In a ditch between the Horns Smithies and the entrance to Knowsley Park,—J.S. It is probably a hybrid and not a distinct species.

THE FLORA OF LIVERPOOL.

4. RUBUS. Linn. *Bramble, Raspberry.*
Icosand. Polygyn. L.

1. R. IDEUS. L. (Common R.) May, June. 24

Wirral,—H. C. Watson, in *Hall's Flora*. Rainford Moss, abundant; and east side of Formby Moss,—W.S. Simons-wood Moss, and in a large boggy wood between Wavertree and Gateacre, plentiful,—W.H.

The foliage suffers from the attacks of a little beetle, *Melolanthia horticola*; when in flower the footstalks are sometimes eaten through by the minute *Dermestes tomentosus*, and bees frequently anticipate us by sucking the fruit with their proboscis.—WIRB.

2. R. RHAMNIFOLIUS. W. & N. (Buckthorn-leaved Bramble.)
 July, August. 24

VAR. b. R. NITIDUS. Salter. (*R. nitidus*. W. & N.)
 (Smooth-shining Bramble.) July, August. 24
 "Eastham Wood,"—H. C. Watson, in *Hall's Flora*.

3. R. CORYLIFOLIUS. Sm. (Hazel-leaved Bramble.) July,
 August. 24
 Hedges and thickets, not uncommon.

4. R. CÆSIUS. L. (Dewberry.) June, July. 24
 Abundant on sand hills on the coast. New Brighton.
 Hoylake, Crosby, Formby, Southport, &c. Seaforth,—
 R. Tudor.

5. R. DISCOLOR. W. & N.; (*R. fruticosus*. E.B.) (Common B.)
 June—August. 24
 Common in woods and hedges.

The leaves are often spotted yellow or brown by *Puccinia roseæ*. *Hecla Rubi* will also be found upon them. A fine intestinal-like canal, occasioned by the passage of a small caterpillar (one of the *Mimæus* of Reaumur), is frequently observed running in a sinuous course through the centre of the leaves.

The practical Entomologist will reap an abundant harvest from the investigation of the flowers of the Bramble, which are the favorite haunts of numerous insects.

5. FRAGARIA. Linn. *Strawberry.* *Icosand. Polygyn.* L.

1. F. VESCA. L. (Wood Strawberry.) May—July. 24
 Woods and thickets, frequent.

Cicada spumaria (Cuckoo-spit or Froth-worm), enveloped in a spume exuded by itself, may frequently be observed on the leaves.

2. F. ELATIOR. Ehrh. (Hautboy S.) June—October. 24
 Banks of the Mersey near the Decoy,—J. Harrison, 1850;
 not a native.

THE FLORA OF LIVERPOOL.

6. COMARUM. Linn. *Marsh Cinque-foil.*

Icosand. Polygyn. L.

1. C. PALUSTRE. L. (Purple M.) May—July. 24

Frequent in boggy meadows and ditches near Liverpool,
and in Wirral.

7. POTENTILLA. Linn. *Cinque-foil.* *Icosand. Polygyn.* L.

1. P. ANSERINA. L. (Silver-weed.) June, July. 24

Moist meadows and way sides, frequent.

2. P. REPTANS. L. (Common creeping C.) June—Sept. 24

Meadows, pastures, and road sides, frequent.

3. P. TORMENTILLA. Sibth. (Tormentil.) June—Aug. 24

a. T. OFFICINALIS. L. (Common T.)

Heaths and barren pastures, common.

b. T. REPTANS. L. (Trailing T.)

Hedge banks, waste places, &c., common.

4. P. FRAGARIASTRUM. Ehrh. (Strawberry-leaved C.) March—
June. 24

Woods, banks, and pastures, frequent.

TRIBE 3. SANGUISORBIDÆ. "Achenes 1—2, enclosed
within the dry calyx-tube."

8. ALCHEMILLA. Linn. *Lady's Mantle.*

Tetrand. Monogyn. L.

1. A. VULGARIS. L. (Common L.) July—August. 24

Common in pastures and way sides.

2. A. ARVENSIS. Sm. (Field L., or Parsley Piert.) May—
August. ☉

Dry gravelly situations and hedge banks, common.

The larva of *Harpalyce subtristata* (the Common Carpet) feeds on this plant.

THE FLORA OF LIVERPOOL.

9. SANGUISORBA. Linn. *Burnet. Tetrand. Monogyn.* L.

1. S. OFFICINALIS. L. (Great B.) June—August. 24
Southport,—“Guide to Southport,”—Mr. Aughton.

10. POTERIUM. Linn. *Salad-Burnet.*
Monœcia. Polyand. L.

1. P. SANGUISORBA. L. (Common S.) June—August. 24
Near Wallasey, on the road to New Brighton,—Mr. Maughan.

11. AGRIMONIA. Linn. *Agrimony.*
Dodecand. Digyn. L.

1. A. EUPATORIA. L. (Common A.) June, July. 24
Meadows, hedge banks, and waste places, frequent both in Wirral and Lancashire.

TRIBE 4. ROSIDÆ. Petals five.

“Achenes numerous, enclosed within the fleshy calyx-tube, which is contracted at the orifice.”

12. ROSA. Linn. *Rose. Dog-Rose. Sweet Briar.*
Icosand. Polygyn. L.

1. R. CINNAMOMEA. L. (Cinnamon R.) May—July. 24
Near where the Railway crosses the Alt at Kirby (? J.D.), abundant,—W.S. Probably an outcast.

2. R. SPINOSISSIMA. L. (Burnet-leaved R.) May, June. 24
Very abundant on the sand hills of the Wirral and Lancashire coast.
Anomala horticola abounds on the flowers of this plant.

3. R. CANINA. L. (Common Dog Rose.) June, July. 24
Thickets, hedges, &c., very common, with its numerous varieties.

THE FLORA OF LIVERPOOL.

4. *R. ARVENSIS*. Huds. (Trailing D.) June, July. 24

Woods, hedges, &c., common.

"On the branches of the various species may be observed those moss-like fibrous excrescences, the habitations of the *Cynips Rosa*. The leaves are often cut in a semi-circular form by the Leaf-cutter Bees, who use the portions of the leaves to line their cells. Towards autumn, scattered on the under side of the leaf, may be found the minute fungus, *Puccinia Rosa*, and different parts of the living plant are often infested with whitish tufts of *Erotium Rosarum*." "The different species are also fed upon by the following insects:—*Pachlocampa Populi* (the December Moth), *Orthosia cruda* (the small Quaker), *Harpolyce fulvata* (the small clouded Yellow), *Lampropteryx badeata* (the Shoulder Stripe), *Anticlea derivata* (the Streamer), &c., &c."

In the Herbarium of the Botanic Garden there is a specimen from Bootle marked *Rosa tomentosa* (?) But this species is not now found there. It is however enumerated in Mr. Aughton's List of Southport Plants.

SUB-ORD. III. POMEÆ. Petals several.

"Carpels united, and adhering by their back to the calyx-tube, thus resembling an inferior fruit. Stipules free."

13. *CRATÆGUS*. Linn. *Hawthorn*.

Icosand. Pentagyn. L.

1. *C. OXYACANTHA*. L. (Hawthorn, White-thorn, or May.)

May, June. 24

In hedges and woods, frequent.

VAR. MONOGYN. Jacq.

About Crosby common,—T. Sansom.

"The following larvæ may be found upon the Hawthorn:—*Pieris Cratagi* (the black-veined White), *Episema cæruleocephala* (the figure of 8 Moth), *Lasiocampa Quercus* (the Great Egger), *Trichiura Cratagi* (the Oak Egger), *Pachlocampa Populi* (the December Moth), *Eriogaster lanestris* (the Small Egger), *Gastropacha Quercifolia* (the Lappet Moth), *Orygia antiqua* (the Vapourer), *Portheia chrysorrhæa* (the Yellow Tail), *P. auriflua* (the Brown Tail), one of the greatest pests of our hedges; it feeds gregariously on plants; in some years its increase is enormous. In 1782, prayers were ordered to be read in all churches, to avert impending calamity from the vast number of larvæ that abounded in that year; having despoiled every hedge and tree, it was feared that they would extirpate the growing corn and grass:—*Niselia Oxycantha* (the Green Brindled Crescent), *Acronycta tridens* (the Dark Dagger), *A. Euphrasia*, *Yponomeuta Evonymella* (the full-spotted Ermine), and *Y. padella* (the small Ermine). Some years these two species are nearly as destructive to hedges as the *Brown Tail*. The diligent Entomologist may collect 400 or 500 species of insects from the blossoms of the Hawthorn during the time that it is in flower, by beating it into a good bag-net, and carefully examining the contents."—BAINES.

THE FLORA OF LIVERPOOL.

14. PYRUS. Linn. *Pear, Apple, Service.*
Icosand. Pentagyn. L.

1. P. COMMUNIS. L. (Wild P.) April, May. ½

Sparingly in woods and hedges near Liverpool and in Wirral, but not native.

"The larvæ of *Smerinthus ocellatus* (the Eyed Hawk), *Egeria Culiciformis*, and *Egeria Formiciformis* (the Flame-tipped Red Belt), feed on this tree."

2. P. MALUS. L. (Crab A.) May. ½

Common in hedges and woods in Wirral and Lancashire.

3. P. AUCUPARIA. Gært. (Mountain Ash or Rowan Tree.)

May, June. ½

Common on Bidston Hill, apparently quite wild. Common on the southern side of Simmons-wood Moss, very dwarfish and undoubtedly wild,—W.H. It is also found in many other situations in the neighbourhood, but probably planted there.

"*Æcidium cornutum* is very frequent on the inferior surface of the leaves in Summer and Autumn; and on both sides may be found *Erineum Sorbi*."—WIT. The larva of *Acronycta sirigosa* may be found occasionally on this plant.

4. P. ARIA. Sm. (White Beam-tree.) May, June. ½

Occasionally found in woods and hedges in Wirral and Lancashire but evidently planted there.

5. P. TORMINALIS. Sm. (Wild S.) May, June. ½

On the rocks of Knots'-hole near Liverpool, in a situation quite exposed to the salt water, and where it must occasionally be washed by the spray of the sea,—Dr. Bostock, in WIT. Recently observed there by Mr. H. Shepherd.

"On the different species may be observed the larvæ of the following lepidopterous insects:—*Vanessa pulex* (the large Tortoise Shell), *V. Antiopa* (the Camberwell Beauty), *Smerinthus ocellatus* (the Eyed Hawk), *Egeria Culiciformis*, *Æ. Formiciformis* (the Flame-tipped Red Belt), these two feed under the bark. *Notodonta dromedarius*, var. (the small Iron Prominent), *Chaonia dodonæa* (the Marbled Brown), *Clisiocampa Neustria* (the Tree Lackey), *Hypogymna dispar* (the Gipsy), *Dasychira fascelina* (the Dark Tussock), *D. pudibunda* (the Pale Tussock), *Orgyia antiqua* (the Vapourer), *Nudaria munda* (the Muslin), *Caradrina ambigua* (the Dotted Rustic), *Miselia compta* (the Marbled Coronet), *Halpalyce rubidata* (the Flame). Beating the blossoms in spring, affords to the Entomologist the richest harvest in *Coleoptera* and *Diptera*. The larva of *Pyrochroa rubens* and *coccinea* feed upon the decaying roots."—BAINES.

THE FLORA OF LIVERPOOL.

ORD. XXV. ONAGRACEÆ. Juss.

The Willow Herb Family.

1. EPILOBIUM. Linn. *Willow Herb.*

Octand. Monogyn. L.

1. E. HIRSUTUM. L. (Great hairy W.) July, August. 24
Sides of ditches, ponds, &c., very frequent.
2. E. PARVIFLORUM. Schreb. (Small-flowered hairy W.)
July, August. 24
In watery places, very common.
3. E. MONTANUM. L. (Broad smooth-leaved W.) June,
July. 24
Common on old walls, dry shady places, &c.
4. E. PALUSTRE. L. (Narrow-leaved Marsh W.) July. 24
Common in marshy and boggy places. Very abundant in
Bidston Marsh, near Southport, &c. Formby,—R. Tudor.

"On the different species may be found the larvæ of *Deilephela Elpenor*, (Elephant Haw M.), and *Graphiphora C. nigrum*, (the Setaceous Hebrew character)."

2. CENOTHERA. Linn. *Evening Primrose.*

Octand. Monogyn. L.

1. C. BIENNIS. L. (Common E.) July—September. ♂
Abundant on the sand hills from Crosby to Southport.
Now also on the sand hills at New Brighton,—T. Sansom.
Probably an outcast originally from a garden. It is
naturalized from Virginia.

3. CIRCÆA. Linn. *Enchanter's Nightshade.*

Diand. Monogyn. L.

1. C. LUTETIANA. L. (Common E.) June—August. 24
Very common in large woods, as at Croxteth, about the
"Old Hut," Hale, Eastham, and other places in Wirral.
Plentiful in a shaded ditch by the side of a footpath
leading from the Old Swan Glass Works to Oak Vale.,—
W.H.
2. C. ALPINA. L. (Alpine E.) July, August. 24
Plentiful in shady places on Billinge Hill,—W.S. Near
St. Helens,—J.H.

THE FLORA OF LIVERPOOL.

ORD. XXVI. HALORAGACEÆ. R. Brown.

The Water-Milfoil Family.

1. HIPPURIS. Linn. *Mare's Tail. Monand. Monogyn. L.*

1. H. VULGARIS. L. (Common M.) May—July. 24

Abundant in ditches and pools at Bidston, Egremont, New Ferry, Hoylake, and other places in Wirral, and in Crosby, and Formby Marshes. Southport.

2. MYRIOPHYLLUM. Linn. *Water-Milfoil.*

Monœcia Polyand. L.

1. M. VERTICILLATUM. L. (Whorled W.) July. 24

Abundant in Formby Marsh. Plentiful about Akear,—W.S. Southport. About Crosby,—J.S. in *Herb.*, and confirmed,—J.D. Gerard's Bridge, St. Helens,—John Harrison. In pits close to Parkgate,—Miss E. Potts. Near Hoylake.

2. M. SPICATUM. L. (Spiked W.) June, July. 24

Very common in ponds, brooks, &c., both in Wirral and Lancashire.

ORD. XXVII. LYTHRACEÆ. Juss.

The Loose-strife Family.

1. LYTHRUM. Linn. *Purple Loose-strife.*

Dodecand. Monogyn. L.

1. L. SALICARIA. L. (Spiked P.) July, August. 24

Very common in ditches and by the side of ponds.

2. PEPLIS. Linn. *Water-Purslane. Hexand. Monogyn. L.*

1. P. PORTULA. L. (Common W.) July, August. ☉

Not uncommon in watery places in Wirral and Lancashire. Ditches at Bidston Hill, Oxtan, Kirby, Heswall Hills, &c. Common at Knowsley, Simmons-wood, &c.,—W.H. Southport.

THE FLORA OF LIVERPOOL.

ORD. XXVIII. CUCURBITACEÆ. Juss.

The Cucumber Family.

1. BRYONIA. Linn. *Bryony. Diæcia Tri-pentand.* L.
1. B. DIOICA. Jacq. (Red-berried B.) May—Sept. ½
Hedges at Weston, near the Soap-works, 1850,—J. Harrison.

ORD. XXIX. PORTULACÆ. Juss.

The Purslane Family.

1. MONTIA. Linn. *Blinks. Triand. Trigyn.* L.
1. M. FONTANA. L. (Water B. or Chickweed.) April—
July. ☉
In wet boggy places and ditch sides, frequent.

ORD. XXX. PARONYCHIACEÆ. St. Hill.

The Knot-wort Family.

1. HERNIARIA. Linn. *Rupture-wort. Pentand. Digyn.* L.
1. H. GLABRA. L. (Glabrous R.) July, August. ¼
Mr. John Harrison, of St. Helen's, brought me, on two occasions in 1850, fresh specimens "gathered near St. Helens Old Railway, at a distance from any house," yet I cannot but consider it as an outcast from some garden. In Glazebrook's Guide to Southport, and in Aughton's List of Southport Plants, it is stated to grow there, but assuredly only as an outcast from a garden,—J.D.
- 2 & 3. SPERGULARIA. Pers., and SPERGULA. Linn. See
CARYOPHYLLACEÆ.
4. SCLERANTHUS. Linn. See SCLERANTHACEÆ.

THE FLORA OF LIVERPOOL.

ORD. XXXI. CRASSULACEÆ.

The Houseleek Family.

1. COTYLEDON. Linn. *Pennywort.*
Decand. Pentagyn. L.

1. C. UMBILICUS. Huds. (Wall P., Navelwort.) June—
August. 4

Not uncommon, especially in Wirral, on rocks, walls, and occasionally bank sides. Plentiful near Wallasey Church Yard. In lanes about Poulton, and between Egremont and New Brighton. About Upper Tranmere, Oxton, &c. Very abundant about Aughton,—W.S.

2. SEMPERVIVUM. Linn. *Houseleek.*
Dodecand. Dodecagyn. L.

1. S. TECTORUM. L. (Common H.) June—August. 4
House tops and walls, occasionally.

3. SEDUM. Linn. *Orpine and Stonecrop.*
Decand. Pentagyn. L.

1. S. TELEPHIUM. L. (Live-long or Orpine.) July, Aug. 4

Hedge banks, waste places, and borders of fields occasionally in Wirral and about Liverpool. In lanes about Oxton, Tranmere, &c. About Bootle, not uncommon,—R. Tudor. By the field sides between Clubmoor and Norris Green, West Derby,—W.H.

2. S. ANGLICUM. Huds. (English S.) June—Aug. ☉

Banks of the Dee. Abundant on Grange and West Kirby Hills,—W.H. Heswall Hills,—W.S. Near Parkgate,—Mr. J. Maughan. Southport,—“Guide to Southport,” by Glazebrook,—and Aughton's List.

3. S. VILLOSUM. L. (Hairy S.) June, July. ♂

This species is inserted in Withering as occurring near Bootle, on the authority of Mr. James Roscoe; but I have never seen or heard of any one else finding it there, nor is it a probable locality.

4. S. ACRE. L. (Biting S. or Wall-pepper.) June. 4

Very common on the Sand hills on the coast, and on banks, stone walls, &c., inland.

THE FLORA OF LIVERPOOL.

5. *S. REFLEXUM*. L. (Crooked Yellow S.) July, Aug. 24
Occasionally on walls, roofs, and thatched buildings.
Tranmere, Claughton Hall, &c.

ORD. XXXII. GROSSULARIACEÆ. De Cand.
The Gooseberry Family.

1. *RIBES*. Linn. *Currant and Gooseberry.*
Pentand. Monogyn. L.

1. *R. GROSSULARIA*. L. (Common G.) April, May. ½
Occasionally in hedges and thickets, but scarcely indigenous.

2. *R. RUBRUM*. L. (Common or Red C.) April, May. ½
Not unfrequent in hedges and thickets, both in Wirral and Lancashire, but not indigenous.

The *Aphis Ribes* frequently attacks this plant, and then the green leaves become red, pitted, and puckered.

A small fungus, *Stromatospheria ribesia*, is found on the dead branches.

3. *R. NIGRUM*. L. (Black C.) April, May. 24
In similar situations and under similar circumstances as the above.

Numerous insects feed on the different species of *Ribes*. "The small caterpillar with brown head and legs, of the beautiful *Ægeria Tipuliformis* (the Currant Hawk), feeds on the pith. *Polia flavocincta* (the Large Ranunculus), the *Glea Satellitia* (the Satellites), and the *Abrazas grossulariata* (the Currant Moth)."

ORD. XXXIII. SAXIFRAGACEÆ. Juss.
The Saxifrage Family.

1. *SAXIFRAGA*. Linn. *Saxifrage.* Decand. Digyn. L.

1. *S. GRANULATA*. L. (White Meadow S.) May, June. 24
Plentiful in an open part of a wood near the top of Jack Lane, West Derby,—W.H. Also with double flowers in Woolton Park, abundantly, where probably it has been planted.

2. *S. TRIDACTYLITES*. L. (Rue-leaved S.) May, June. ☉
Abundant on sand hills on both sides of the estuary, from Hoylake to Southport; also on old walls, occasionally, inland. Wallasey, Bidston, &c., Brighton,—R. Tudor.

THE FLORA OF LIVERPOOL.

2. CHRYSOSPLENIUM. Linn. *Golden-Saxifrage*.
Decand. Digyn. L.

1. C. OPPOSITIFOLIUM. L. (Common G.) July. 24
In moist shady places, frequent. Bromboro', Eastham, &c.

ORD. XXXIV. UMBELLIFERÆ. Juss.
The Umbelliferous Family.
Pentand. Digyn. Linn.

1. HYDROCOTYLE. Linn. *White-rot*.

1. H. VULGARIS. L. (Common W. or Marsh-Pennywort.)
May—August. 24
Very common by the sides of ponds and ditches.

2. SANICULA. Linn. *Sanicle*.

1. S. EUROPÆA. L. (Wood S.) June, July. 24
In woods and shady places, common. Eastham, Brom-
boro', Hale, Croxteth, &c.

3. ERYNGIUM. Linn. *Eryngo*.

1. E. MARITIMUM. L. (Sea-E. or Sea-Holly.)
Common on the sand hills from the Dee to Southport.

4. APIUM. Linn. *Celery*.

1. A. GRAVEOLENS. L. (Smallage or Wild C.) June—
August. ♂
Muddy inlets of the Mersey, common, as at Wallasey and
Bromboro' Pools, and at Garston, Leasowe, and Bidston
Marsh. Near Rimrose Bridge, Bootle, Southport.

5. HELOSCIADIUM. Koch. *Marsh-wort*.

1. H. NODIFLORUM. Koch. (Procumbent M.) July, Aug. 24
Very common in ditches and boggy places.

VAR. H. REPENS. Koch. (*Sium repens*. L.) (Creep-
ing M.) June, July. 24
Plentiful in a ditch near Gillmoss Chapel,—W.H. Bid-
ston Marsh. Southport,—Mr. Aughton.

THE FLORA OF LIVERPOOL.

2. *H. INUNDATUM*. Koch. (Least M.) June, July. 2
Marshy ground, not uncommon. Abundant in Formby
Marsh,—W.S.

6. *SISON*. Linn. *Bastard Stone-Parsley*.

1. *S. AMOMUM*. L. (Hedge Bastard S.) Aug., Sept. 3
Plentiful in hedge banks about Upton. Abundant by the
side of a lane between West Kirby and Newton-cum-
Larton,—W.S.

7. *ÆGOPODIUM*. Linn. *Gout-Weed*.

1. *Æ. PODAGRARIA*. L. (Common G. or Bishop-weed.)
June—August. 2
Common in plantations on the north side of the road
between Clegg's pits and Mr. T. Rathbone's, Allerton.
Plentiful by the side of a lane leading to the south side of
Simmons-wood Moss,—W.H. Plentiful in a plantation
near Warbreck Moor, Walton,—W.S. In a wood by the
road side near Fazakerley.

8. *CARUM*. Linn. *Caraway*.

1. *C. CARUL*. L. (Common C.) May, June. 3
Abundant on each side of the road from Oak Vale to Roby,
and also on the Railway banks between these two places,
—W.H. Near Mosley Hill,—Mr. H. Shepherd. Doubt-
less, in these cases, a straggler from some garden.

9. *BUNIUM*. Koch. *Earth-nut*.

1. *B. FLEXUOSUM*. With. (Common E.) May, June. 2
In woods and pastures, very common.

10. *PIMPINELLA*. Linn. *Burnet-Saxifrage*.

1. *P. SAXIFRAGA*. L. (Common B.) July—September. 2
Common on the sand banks from Hoylake to Southport.
On the river banks between Egremont and Seacombe.
Amongst gorze bushes about Bidston Light-house and
New Brighton.

THE FLORA OF LIVERPOOL.

2. *P. MAGNA*. L. (Greater B.) July, August. 24

"Plentiful amongst gorze bushes between New Brighton and Wallasey,"—Hall's Flora.

After a careful comparison of specimens in my herbarium, gathered in the above locality, with those supplied to me by the Edinburgh Bot. Soc., I can detect no important difference between them, and can therefore venture to confirm Mr. Hall's accuracy. (See Watson's *Cybele Brit.*, vol. i, p. 438.)

Frequent in Cheshire,—W. Wilson, in *Hall's Flora*.

11. *SIUM*. Linn. *Water-Parsnep*.

1. *S. ANGUSTIFOLIUM*. L. (Narrow-leaved W.) July, August. 24

In ponds and ditches, not uncommon.

12. *BUPLEURUM*. Linn. *Hare's Ear*.

1. *B. TENUISSIMUM*. L. (Slender H.) Aug., Sept. ☉

Banks of the Dee, below Queen's Ferry,—Dr. Woods.

13. *CENANTHE*. Linn. *Water-Dropwort*.

1. *C. FISTULOSA*. L. (Common W.) July—Sept. 24

In ponds and ditches, common.

2. *C. PIMPINELLOIDES*. L. (Callous-fruited W.) June—August. 24

The habitats described in Hall's Flora, under this name, belong to the next species. I am not aware that *C. pimpinelloides*, L. has ever really been found in this locality.

3. *C. LACHENALII*. Gmel. (*C. pimpinelloides*. Huds. and E. B.) (Parsley W.) July—Sept. 24

Wallasey Pool, very abundant. Crosby Marsh, and wet places amongst the sand hills. Bootle,—R. Tudor. Southport.

4. *C. PEUCIDANIFOLIA*. Sibth. (*C. silaifolia*. Bieb.) (Sulphur-wort W.) June. 24

The habitats given by Aughton and J.S., in *Herb.*, under this head, are to be referred probably to *C. Lachenalii*, Gmel., as *C. peucedanifolia*, Sibth., has not been found, I believe, in this locality.

THE FLORA OF LIVERPOOL.

5. *CE. CROCAT.* L. (Hemlock W.) June—August. 24
Common in ponds and ditches.

6. *CE. PHELLANDRIUM.* Spr. (Fine-leaved W.) July—
September. 24

In a pit on the left side of the road leading from Garston Village to Speke Hall, rare,—W.S. In a ditch by the side of a lane commencing at a guide post about half a mile beyond Gateacre, and leading in the direction of Hale,—W.H. Allerton,—J.S. in *Herb.* Southport,—H. Aughton.

14. *ÆTHUSA.* Linn. *Fool's Parsley.*

1. *Æ. CYNAPIUM.* L. (Common F.) July, August. ☉
In fields and gardens, common.

15. *FENICULUM.* Hoffm. *Fennel.*

1. *F. VULGARE.* Gært. (Common F.) July. 24
Common on the sand hills at Hoylake,—W.S. Though abundant in the above locality, and found occasionally in other localities, both on the coast and inland, it cannot, I conceive, be regarded otherwise than introduced. (J.D.)

16. *SILAUS.* Besser. *Pepper Saxifrage.*

1. *S. PRATENSIS.* Bess. (Meadow P.) June—Sept. 24
Not very unfrequent in pastures and meadows. Plentiful near Wallasey Pool. Near Poulton. Sutton,—R. Slack, in Hall's Flora. Abundant in sandy fields about Hoylake,—W.S.

17. *CRITHMUM.* Linn. *Samphire.*

1. *C. MARITIMUM.* L. (Sea S.) May—August. 24
Stated erroneously, in "Guide to Southport," to grow there.

18. *ANGELICA.* Linn. *Angelica.*

1. *A. SYLVESTRIS.* L. (Wild Angelica.) July. 24
In ditches and shaded watery places, frequent.

THE FLORA OF LIVERPOOL.

19. PEUCEDANUM. Linn. *Hog's Fennel*.

1. P. PALUSTRE. Mœnch. (Marsh H. or Milk-Parsley.)

July, August. 24

Southport,—“Guide to Southport.”

Has not Mr. Glazebrook here mistaken *Enanthe Lachenalis* or *Silene pratensis* for the present species? At any rate this habitat requires confirmation. (See Watson's *Cybele*, vol. i, p. 453.)

20. PASTINACA. Linn. *Parsnep*.

- P. SATIVA. L. (Common wild P.) June, July. ♂

Abundant on the sand hills between Crosby, Formby, and Southport, especially at the former places. Hoylake,—R. Tudor. Near Parkgate,—Miss E. Potts. On the banks of the Railway between Broad Green and Roby,—W.H. There appears no sufficient ground to suspect (at least in the first habitats) its having been introduced into this locality from gardens.

21. HERACLEUM. Linn. *Cow-Parsnep*.

1. H. SPHONDYLIIUM. L. (Common C. or Hog-weed.)

July. ♂

Very abundant in hedges and pastures.

22. CONTIUM. Linn. *Hemlock*.

1. C. MACULATUM. L. (Common H.) June, July. ♂

In waste grounds and by road sides, not uncommon. Abundant by side of a footpath between Hoylake and Saughull-Massie,—W.S. Croxteth woods,—W.H. Southport.

23. SMYRNIUM. Linn. *Alexanders*.

1. S. OLUSATRUM. L. (Common A.) May, June. ♂

In a lane leading from Morton Village to Leasowe, abundant,—W.S. At Poulton, near Wallasey Pool.

24. SCANDIX. Linn. *Shepherd's-Needle*.

1. S. PECTEN. L. (Common S. or Venus' Comb.) June—September. ☉

Corn fields and waste places, frequent.

THE FLORA OF LIVERPOOL.

25. ANTHRISCUS. Pers. *Beaked-Parsley.*

1. A. SYLVESTRIS. Koch. (Wild B.) April—June. 4
Hedges and borders of fields, frequent.
2. A. VULGARIS. Pers. (Common B.) May, June. ☉
Common in waste places and roadsides near farm-houses and villages.

26. CHÆROPHYLLUM. Linn. *Chervil.*

1. C. TEMULENTUM. L. (Rough C.) June, July. 4
Hedges and copses. Very common in the inland parts of Wirral and the neighbourhood of Liverpool.

27. DAUCUS. Linn. *Carrot.*

1. D. CAROTA. L. (Wild C.) June—August. ♂
Very common in dry poor pastures and borders of fields.
2. D. MARITIMUS. With. (Sea-side C.) July, August. ♂
There is a plant found on the banks of the Mersey, between the Dingle and Garston, and also at Wallasey Pool and Hoylake, which closely corresponds with the description by Withering and Smith, of *D. maritimus* and with the plate in Eng. Botany.

28. TORILIS. Adans. *Hedge Parsley.*

1. T. ANTHRISCUS. Gärtn. (Upright H.) July—Sept. ☉
Hedges and waste places, common.
2. T. INFESTA. Spreng. (Spreading H.) July—Sept. ☉
Common in fields and way sides.
3. T. NODOSA. Gärtn. (Knotted H.) May—July ☉
Waste places, and by road sides, not uncommon. Frequent by the Railway at Simmons-wood. Plentiful on an old wall between Buckley Hill School-house and Sephton Church,—W.S.

29. ECHINOPHORA. Linn. *Prickly Samphire.*

1. E. SPINOSA. L. (Sea-side P. or Sea-parsnep.) July. 4
Stated by Mr. Glazebrook, in the "Guide to Southport," to grow there; but it certainly is not now to be found growing on this coast.

THE FLORA OF LIVERPOOL.

ORD. XXXV. ARALIACEÆ. JUSS.

The Ivy Family.

1. ADOXA. Linn. *Moschatell. Octand. Tetragyn. L.*

1. A. MOSCHATELLINA. L. (Tuberous M.) April, May. 24

Woods, hedge banks, and shady places, common.

Puccinia Adoxa and *Uredium albesceus* are sometimes found on the leaves and stems of this plant.—BAXTER.

2. HEDERA. Linn. *Ivy. Pentand. Monogyn. L.*

1. H. HELIX. L. (Common I.) October, November. 24

Woods, hedges, old buildings, rocks, and trunks of trees, very frequent. A very variable plant in form and appearance.

Spharia Hedera is parasitic on the leaves of the Ivy.

ORD. XXXVI. CORNACEÆ. De Cand.

The Dogwood Family.

1. CORNUS. Linn. *Cornel. Dogwood.*

Tetrand. Monogyn. L.

1. C. SANGUINEA. L. (Wild C. or D.) June, July. 1/2

In the woods at Little Crosby, abundant,—W.S. Most probably, however, introduced.

ORD. XXXVII. LORANTHACEÆ. JUSS.

The Mistletoe Family.

1. VISCUM. Linn. *Mistletoe.*

1. V. ALBUM. L. (Common Mistletoe.) May. 1/2

Diœc. Tetrand. L.

This plant has been occasionally found in the neighbourhood; but in every case, I believe, introduced, as conjectured by Mr. Watson. (See *Cybele Brit.*, vol. ii, p. 5.)

THE FLORA OF LIVERPOOL.

B. Corolla Monopetalous. (Ord. xxxviii—xliv.)

ORD. XXXVIII. CAPRIFOLIACEÆ. Juss.

The Honeysuckle Family.

1. SAMBUCUS. Linn. *Elder.* *Pentand. Trigyn.* L.

1. S. EBULUS. L. (Dwarf E. or Dane-wort.) June,
July. 4

In moist situations about Liverpool, and occasionally in Wirral,—H. Shepherd, in *Hall's Flora*. Near the Botanic Garden, and near the village of Oxton,—A. Murray, in *Hall's Flora*. Not now found in the former locality. Abundant in a hedge bank near Saughall-Massie,—W.S.

2. S. NIGRA. L. (Common E.) June. ½

Common in woods and hedges.

"The larva of *Mamestra Persicaria* (the Dot) may be found on this plant."

2. VIBURNUM. Linn. *Guellder-Rose.*

Pentand. Trigyn. L.

1. V. OPULUS. L. (Common G.) June, July. ½

Common in woods and hedges.

3. LONICERA. Linn. *Honey-suckle.*

Pentand. Monogyn.

1. L. CAPRIFOLIUM. L. (Pale perfoliate H.) June. ½

In a hedge near the old Toll-bar, Aigburth, abundant, but probably introduced.

2. L. PERICLYMENUM. L. (Common H. or Woodbine.)

June—August. 4

Woods and hedges, frequent.

3. L. XYLOSTEUM. L. (Upright Fly H.) June, July. ½

In a hedge near the old Toll-bar, Aigburth, but probably introduced; as also in a hedge near Gill Moss Chapel.

"Upon the Honeysuckle may sometimes be found the larvæ of *Vanessa C. album* (the White Comma), *Limenitis Camilla* (the White Admiral), *Sesia Bombyliiformis* (the Narrow-bordered Bee-Hawk Moth), *Sesia fuciformis* (the Broad-bordered Bee-Hawk Moth), and *Semiophora gothica* (the Hebrew Character)."

THE FLORA OF LIVERPOOL.

ORD. XXXIX. RUBIACEÆ. Juss.

The Madder Family.

1. GALIUM. Linn. *Bed-straw. Tetrand. Monogyn.* L.

1. G. VERUM. L. (Yellow B.) June—August. 24.

Very abundant on the sand hills on the coast, from the Dee to Southport.

2. G. CRUCIATUM. L. (Cross-wort B., Mug-wort.) April—June. 24

Very abundant in hedges and dry banks about Eastham, Hooton Hall, Sutton, &c.

3. G. SAXATILE. L. (Smooth-Heath B.) May—August. 24

Common in dry heathy situations, and hilly pastures. Bootle, Formby, Southport. Tranmere Heath, Bidston Heath, Oxton Moor, and many similar situations in Wirral.

4. G. ULIGINOSUM. L. (Rough Marsh B.) July—Aug. 24

In wet marshy places and ditch sides, common.

5. G. PALUSTRE. L. (White Water B.) July, August. 24

Sides of ditches, ponds, &c., not uncommon. Sefton,—T. Sansom.

VAR. a. Hook. & Arnott. G. PALUSTRE. E.B. and

VAR. b. Hook. & Arnott. G. WITHERINGII. E.B.

Nearly equally common, Crosby, Formby, Southport, &c.

6. G. APARINE. L. (Goose-Grass or Cleavers.) June, July. ☉

In hedges, &c., very common.

"The different species afford food to the larvæ of the following insects:—*Charocampa Elpenor* (the Elephant Hawk), *Charocampa Porcellus* (the Small Elephant), *Macroglossa Stellatarum* (the Humming Bird), *Spilosoma Menthastris* (the Large Ermine), *Agrotis aquilina*, *Cidaria unidentaria* (the Dark-barred Twin-spot), *Harpalyce Galiata* (the Galium Carpet), *Harpalyce tristata* (the Small Argent and Sable), *Anticlea rubidata* (the Flame), and *Anticlea sinuata* (the Royal Mantle), *Sesia fuciformis* (the Broad-bordered Bee-Hawk Moth), &c."

2. SHERARDIA. Linn. *Sherardia or Field-Madder.*

Tetrand. Monogyn. L.

1. S. ARVENSIS. L. (Blue S. or F.) April—Sept. ☉

Very common in dry gravelly fields and waste ground.

THE FLORA OF LIVERPOOL.

3. ASPERULA. Linn. *Woodruff. Triand. Monogyn. L.*

1. A. ODORATA. L. (Sweet W.) May, June. 24
Frequent in woods, shady hedge-banks, &c.

2. A. ARVENSIS. L. (Field W.) June. ☉
Growing rather abundantly near Eccleston,—J. Harrison;
but assuredly introduced.

ORD. XL. VALERIANACEÆ. JUSS.

The Valerian Family.

1. CENTRANTHUS. De Cand. *Spur-Valerian.*
Triand. Monogyn. L.

1. C. RUBER. D.C. (*Valeriana rub.* L.) (Red S.) June—Sept. 24
On old walls near villages, as at Garston, Tranmere, &c.;
but in all such cases introduced.

2. VALERIANA. Linn. *Valerian. Triand. Monogyn. L.*

1. V. DIOICA. L. (Small Marsh V.) May, June. 24
Sefton meadows, rare,—W.S. Woolton meadows. South-
port,—H. Aughton.

2. V. OFFICINALIS. L. (Great Wild V.) June—Aug. 24
VAR. a. V. ANGUSTIFOLIA. Tausch. "Leaflets 7—10
pairs, dentate-serrate or entire."

VAR. b. V. SAMBUCIFOLIA. Mik. "Leaflets 4—5
pairs, dentate-serrate."

By the side of ponds and in marshy places, frequent.
Abundant between Bidston and Hoylake,—W.S.; and on
Gill Moss,—W.H. Maghull, Kirby, Formby, Southport,
&c., and in Wirral.

3. FEDIA. Vahl. *Corn-Salad. Triand. Monogyn. L.*

1. F. OLITORIA. Vahl. (Common C., or Lamb's Lettuce.)
April—June. ☉
Abundant in corn fields, and on the sand hills along the
coast.

2. F. DENTATA. Vahl. (Smooth narrow-fruited C.) June,
July. ☉
Borders of fields near Upper Tranmere, Rock Ferry, and
Bromboro', frequent. Crosby,—J.S. in *Herb.*

THE FLORA OF LIVERPOOL.

ORD. XLI. DIPSACACEÆ. Juss.

The Teasel Family.

1. DIPSACUS. Linn. *Teasel. Tetrand. Monogyn. L.*

1. D. SYLVESTRIS. L. (Wild T.) July. 4

Abundant on the banks of the Mersey, between the Dingle and Garston. Also about Bidston, Upton, Morton, and other places in Wirral. Southport,—H. Aughton.

2. SCABIOSA. Linn. *Scabious. Tetrand. Monogyn. L.*

1. S. SUCCISA. L. (Devil's-bit S.) July—October. 4

Damp pastures and meadows, common.

"The larvæ of *Melitæa Artemis* (the Greasy Fritillary), *Fidonia atomaria* (the Heath Moth), *Sesia fusiformis* (the Broad-bordered Bee-Hawk Moth), and *Eutemonia russula* (the Clouded Buff Moth), feed on this species."

3. KNAUTIA. Linn. *Knautia. Tetrand. Monogyn. L.*

1. K. ARVENSIS. Coult. (*Scabiosa. L.*) (Field K.) June—August. 4

Crosby,—J.S. in *Herb.* Wirral,—H. C. Watson, in *Hall's Flora*. Frequent in fields to the north of Childwall Church,—W.H. Frequent in corn fields near Neston,—J. Sk. Corn fields near Aigburth; Southport, &c.

ORD. XLII. COMPOSITÆ. Juss.

The Composite Family.

TRIBE 1. CICHORACEÆ. Juss. *Chicory or Lettuce Tribe.*

"Florets all ligulate and perfect. Style not swollen beneath its branches." (*Gen. 1—12.*)

Syngenesia Æqualis. Linn.

1. TRAGOPOGON. Linn. *Goat's Beard.*

1. T. PRATENSIS. L. (Yellow G.) June, July. ♂

Common on the sand hills along the coast from Hoylake to Southport. Also in meadows and pastures inland, as on the sandy parts of Gill-moss, (W.H.), clay banks of the Mersey at Aigburth, (W.S.), pastures near Hale, &c.

THE FLORA OF LIVERPOOL.

VAR. a. Hook. & Arnott. "Involucre about as long as the corollas."

VAR. b. Hook. & Arnott. T. MINOR. Fries.
"Involucre twice as long as the corollas."

Both varieties are met with on the sand hills, but the first is the more common.

2. HELMINTHIA. Juss. *Ox-tongue*.

1. H. ECHIOIDES. Gærtn. (*Picris echiioides*. L.) (Bristly O.)
June—August. 24

Clay banks on the shore of the Mersey at Aigburth, abundant. Hedge banks by the road side from Bidston to Hoylake, frequent,—W.S. Common on clay land between Hoylake and Saughall-Massie,—W.H. South shore of Liverpool, and near Speke Hall,—J.S. in *Herb.* Walton,—R. Tudor. Frequent on the road from Cloughton to Upton, and near Bromborough Pool.

3. APARGIA. Schr. *Hawk-bit*.

1. A. HISPIDA. Willd. (Rough H.) June—August. 24
Meadows and pastures, not unfrequent in Wirral.
2. A. AUTUMNALIS. Willd. (Autumnal H.) August. 24
Very common in meadows, pastures, and waste places.

4. THRINCLIA. Roth. *Thrinclia*.

1. T. HIRTA. Roth. (Hairy T.) July, August. 24
Common in gravelly places, meadows, and way sides.

5. HYPOCHÆERIS. Linn. *Cal's-ear*.

1. H. RADICATA. L. (Long-rooted C.) July, August. 24
Common in meadows, pastures, and way sides.
"The larvæ of *Cerigo texta* (the Straw-coloured Underwing), and of *Pyrophila Tragopogonis* (the Mouse), feed on this species."

6. LACTUCA. Linn. *Lettuce*.

1. L. MURALIS. Less. (*Prenanthes Muralis*. L.) (Ivy-leaved L.) June—August. 24 or 3
Frequent in woods at Ince. Plentiful in a wood between Billinge and Windle,—W.S. Sefton,—T. Sansom.

THE FLORA OF LIVERPOOL.

7. SONCHUS. Linn. *Sow-thistle.*

1. S. ARVENSIS. L. (Corn S.) July, August. 24

Very common in corn fields.

The parasitic fungus, *Uredo Sonchi*, at first bright scarlet, afterwards orange, lives on the stalks and leaves of this and the following species.

2. S. OLERACEUS. L. (Common annual S.) June—Aug. ☉

VAR. a., leaves divided. VAR. b., leaves entire.

Both varieties very common in waste places and cultivated ground.

"The larvae of *Cuonulia umbratica* (the Large Pale Shark), *Cuonulia lucifuga* (the Large Dark Shark), and *Aclebia praeox* (the Portland), feed on this plant."

3. S. ASPER. Hoffm. (Sharp-fringed annual S.) June—Aug. ☉

Common in waste places and cultivated ground.

8. CREPIS. Linn. *Hawk's-beard.*

1. C. VIRENS. L. (*C. tectorum*. E.B.) (Smooth H.)
June—September. ☉

Common in dry pastures, and on old walls.

9. LEONTODON. Linn. *Dandelion.*

1. L. TARAXACUM. L. (Common D.) March—Oct. 24

VAR. a. Hook. & Arnott. TARAXACUM OFFICINALE.

Wigg. "Outer scales of the involucre reflexed."

In pastures, meadows, and road sides, very common.

VAR. b. Hook. & Arnott. L. PALUSTRE. Sm.

"Scales of the involucre erect, appressed."

Very plentiful on the sand hills along the coast, especially at New Brighton.

There is a curious spotted variety (similar to *Hieracium Maculatum*) found abundantly near Waterloo.

"The larvae of *Acontia solaris*, (the Black Kidney), *Polia advena* (the Pale Shining Brown), *Dasychira fascelina* (the Dark Tussock), *Graphiphora tristigma*, *Caradrina ambigua* (the Dotted Rustic), *Gleba polita* (the Netted Chestnut), *Hadena plebea* (the Shrew), and of *Polia occulta* (the Great Brocade), feed upon this plant."

THE FLORA OF LIVERPOOL.

10. HIERACIUM. Linn. *Hawk-weed.*

1. H. PILOSELLA. L. (Common Mouse-ear H.) May—August. 24

Hedges, banks, and dry pastures, very frequent.

2. H. MYRORUM. L. (Wall H.) June—August. 24

Woods at Speke,—G. S. Deane. Old Walls near New Brighton, and New Ferry, &c., not uncommon.

2. H. SYLVATICUM. Sm. (Wood H.) July, August. 24

Sand-hills at New Brighton, abundant. Walls and banks about Billinge and Windle, common,—W. S.

4. H. BOREALE. Fr. (*H. subaudum*. Sm.) July—Sept. 24

Very abundant in shady situations and hedges, both in Wirral and Lancashire. Sand hills on the coast from Hoylake to Southport, not uncommon.

5. H. UMBELLATUM. Linn. (Narrow-leaved H.) August, September. 24

Sand hills from Hoylake to Southport, common, especially at New Brighton and Crosby. Frequent on the side of some rocky lanes between Club Moor and West Derby village,—W.H.

"The stem of this plant is usually attacked near the centre by insects, which cause an oval swelling of considerable size. Though *H. umbellatum*, *subaudum*, and *sylvaticum*, are often growing close to each other on the sand-hills at New Brighton, still it is in all cases the former species only that is attacked. The swollen stems, quite dried and withered, with the cavities made by the insects, may be noticed remaining late in the year."—T. B. HALL.

The Hawkweeds yield food to comparatively few insects. "Upon some of the species may be found *Hipparchus Sithonus* (the Gate Keeper), *Anthrocera Filipendule* (the Six-spot Burnet), and *Polia serena* (the Broad-barred White.)"

11. LAPSANA. Linn. *Nipple-wort.*

1. L. COMMUNIS. L. (Common N.) July, August. ☉

Waste ground and road sides, frequent.

"The larva of *Cucullia Lactuce* (the Lettuce Shark), feeds upon this plant."

12. CICHORIUM. Linn. *Succory.*

1. C. INTYBUS. L. (Wild S.) July—October. 24

Borders of fields and waste places. Abundant in a field near the sand hills at Crosby,—W.S. Abundant in a field near the Railway and Boby village,—W.H. Little Sutton,—R. Slack, in *Hall's Flora*. Southport,—R. Aughton. Between Aintree and Maghull.

THE FLORA OF LIVERPOOL.

TRIBE 2. CYNAROCEPHALÆ. Juss.

Artichoke or Thistle Tribe.

"Florets all tubular, homogamous, or those of the ray neuter.

Style swollen below its branches." (*Gen.* 13—19.)

Syngenes. Æqualis. Linn.

13. ARCTIUM. Linn. *Burdock.*

1. A. LAPPÀ. L. (Common B.) July, August. ♂

VAR. a. A. BARDANA. E.B. "Involucre in fruit
cottony. Leaves even."

VAR. b. A. LAPPÀ. E.B. "Involucre in fruit
smooth. Leaves wavy." Lindl.

"In general our a. has the heads of flowers on long peduncles and corymbose
arranged, but we have seen specimens with them nearly sessile and crowded or race-
mosely arranged as in our b."—HOOK. AND ARNOTT.

Both varieties very common in waste grounds and by road
sides.

"The larvæ of *Polia Chi* (the July Chi), *Hepialus Humuli* (the Ghost), *Lalia
cenosa*, and *Gortyna flavago* (the Frosted Orange), feed upon the pith."

14. SERRATULA. Linn. *Saw-wort.*

1. S. TINCTORIA. L. (Common S.) August. 24

Woods and pastures. Not uncommon in the Dingle, and
at Otterspool, and in the pastures between these places.
Sutton,—J. Harrison. Gilbrook, formerly abundant, now
rare.

15. CARDUUS. Linn. *Thistle.*

1. C. TENUIFLORUS. Curt. (Slender-flowered T.) June—
August. ☉ or ♂

Waste sandy places, especially near the sea. Bootle,
Crosby, Southport, Egremont, Hoylake, Cloughton, &c.,
not uncommon.

2. C. MARIANUS. L. (Milk T.) July. ♂

Southport,—R. Aughton. Introduced,—J.D.

16. CNICUS. Linn., Willd. *Plume-thistle.*

1. C. LANCEOLATUS. Willd. (Spear P.) July, August. ♂

Way sides and pastures, very common.

THE FLORA OF LIVERPOOL.

2. *C. PALUSTRIS*. Willd. (Marsh P.) July. ♂
Moist meadows and shady places, frequent, with both purple and white flowers.
3. *C. ARVENSIS*. Hoff. (Creeping P.) July. 4
In fields and by road sides, very common.
4. *C. ERIOPHORUS*. Willd. (Wooly-headed P.) July, August. ♂
Southport,—R. Aughton's List. This however requires confirmation, as I have never been able to meet with any one else who has seen it growing in this locality.

17. ONOPORDUM. Linn. *Cotton-thistle*.

1. *O. ACANTHIUM*. L. (Common C.) July, August. ♂
Waste ground and gravelly soils. Hoylake and West Kirby, plentiful. About Saughall-Massie, rare,—J. Sk.

18. CARLINA. Linn. *Carline-thistle*.

1. *C. VULGARIS*. L. (Common C.)
Common on the sand hills of Crosby, Formby, and Southport.

19. CENTAUREA. Linn.

Knapweed, Blue-bottle, and Star-thistle.

Syngenes. Frustranea. Linn.

1. *C. NIGRA*. L. (Black discoid K.) June—August. 4
Meadows, pastures, and road sides, very frequent.
2. *C. SCABIOSA*. L. (Greater K.) July—September. 4
Corn fields, barren pastures, &c. Fields near Seaforth, abundant in 1844. Field near Wallasey Church,—Mr. Maughan. Southport,—H. Aughton, and Mr. Glazebrook.
"The larva of *Orthosia Pistacina* (the Veiny Chestnut), may occasionally be found on this species."
3. *C. CYANUS*. L. (Corn B.) June—August. ☉
Corn fields, occasionally. Crosby, Formby, Southport. Once in a corn field at Fazakerley,—W.S.
4. *C. SOLSTITIALIS*. L. (Yellow S.) July. ☉
This plant was found by John Harrison, in a field near St. Helens old Railway, in 1850. It was most probably introduced with the sown seeds.

THE FLORA OF LIVERPOOL.

TRIBE 3. CORYMBIFERÆ. Juss.

"Florets of the same head all homogamous (and usually tubular); or those of the circumference filiform or tubular and pistilliferous, or ligulate. Style of the perfect florets not swollen below its branches." (*Gen.* 20—37.)

SUB-TRIBE 1. TUBIFLORÆ. "Heads discoid."
(*Gen.* 20—26.)

20. BIDENS. Linn. *Bur-marigold.*
Syngenes. Æqualis. Linn.

1. B. CERNUA. L. (Nodding B.) July—September. ☉
Sides of ponds, ditches, &c., frequent.
2. B. TRIPARTITA. L. (Trifid B.) July—September. ☉
In similar situations with the former, but more common.

21. TANACETUM. Linn. *Tansy.*
Syngenes. Superflua. Linn.

1. T. VULGARE. L. (Common T.) July, August. 24
On hedge banks, very frequent. Very abundant on every ditch, brook, and pond-side on Gill Moss, and the northern side of Croxteth-park,—W.H.

"The larvæ of *Papilio Machaon* (the Swallow-tail), and *Cucullia Tanacetii*, (the Tansy), feed upon this plant. Also the larva and perfect insect of *Chrisomela fulgida*."

22. ARTEMESIA. Linn. *Wormwood, Southernwood, Mugwort.*
Syngenes. Superflua. Linn.

1. A. VULGARIS. L. (Common M.) July—September. 24
Borders of fields, hedge-banks, and waste-places, common.

2. A. ABSINTHIUM. L. (Common W.) August. 24
Formerly at Bidston, but now (1851) destroyed. Near Hoylake, not common,—W.S. Poulton, near the hotel.

"The larvæ of *Polia dysodea* (the Ranunculus), *Cidaria munitata* (the Rufus Carpet), *Pterophorus microdactylus* (the Small Plume), *Pterophorus tetradactylus* (the white-shafted Plume), and *Cucullia Absinthii* (the Wormwood), feed on this plant."

THE FLORA OF LIVERPOOL.

3. *A. MARITIMA*. L. (Sea W.) August—September. 24
Muddy inlets of the Mersey, at Garston, and Wallasey
and Bromboro' Pools, common. Aigburth.

23. *EUPATORIUM*. Linn. *Hemp-agrimony*.
Syngenes. Aequalis. Linn.

1. *E. CANNABINUM*. L. (Common H.) July—Sept. 24
In wet places and by the side of ditches, frequent in
Wirral and Lancashire.
" *Plusia orichalcea* (the Scarce Burnished Brass), feeds on this plant."

24. *GNAPHALIUM*. Linn. *Cudweed*.
Syngenes. Superflua. Linn.

1. *G. SYLVATICUM*. L. (Highland C.) August. 24
VAR. a. Hook. & Arnott. (*G. RECTUM*. E.B.)
(Upright C.)
Woods and pastures, not uncommon. Sandy lanes about
Simmons-wood, frequent. Hills about West Kirby. Fre-
quent in some fir woods at Bidston,—W.S. Frequent
about the stone quarry at Knowsley,—J. Sk. Bromboro',—
T. Sansom. Southport.

2. *G. ULIGINOSUM*. L. (Marsh. C.) Aug., Sept. ☉
Sandy and gravelly wet places, very common.

25. *FILAGO*. Linn. *Filago*.
Syngenes. Superflua. Linn.

1. *F. MINIMA*. Pers. (*Gnaphalium minimum*. L.) (Least F.)
June—August. ☉
Dry heathy and gravelly places, frequent. New Brighton
Stone Quarry, abundant. Allerton, J.S. in *Herb*. By the
road side, Simmons-wood Moss,—W.H. Sandy Fields at
Crosby, Formby and Southport.
2. *F. GERMANICA*. L. (*Gnaphalium Germanicum*. Sm.)
(Common F.) June—August. ☉
Dry gravelly and sandy pastures, not uncommon. Allerton,
—J.S. in *Herb*. About Oxton Moor, Bidston Hill, &c.
Fields at Formby and Ainsdale,—W.S. Southport.

THE FLORA OF LIVERPOOL.

26. PETASITES. Desf. *Butter-Bur.*
Syngenes. Superflua. Linn.)

1. P. VULGARIS. Desf. (Common B.)

Wet meadows and road sides, not uncommon. Plentiful by the Mersey side opposite Speke Hall,—W.S. Plentiful about one hundred yards beyond Bidston, on the Hoylake road.

SUB-TRIBE 2. RADIATÆ. "Heads with a ligulate ray."

Syngenes. Superflua. Linn. (*Gen.* 27—37.)

27. TUSSILAGO. Linn. *Colt's-foot.*

1. S. FARFARA. L. (Colt's foot.) March, April—before the leaves. 4

Wet clayey soils, far too abundant.

28. ERIGERON. Linn. *Flea-bane.*

1. E. ACRIS. (Blue F.) July, August. ♂

Plentiful on the sand hills at New Brighton, Crosby, Formby, and Southport. Occasionally also it is found inland.

29. ASTER. Linn. Starwort. *Michaelmas Daisy.*

1. A. TRIPOLIUM. L. (Sea S. or M.) Aug., Sept. 4

Shores of the Mersey, very common. Wallasey and Bromboro' Pools, Garston, Bootle, Formby, Southport, &c.

30. SOLIDAGO. Linn. *Golden-rod.*

1. S. VIRGAUREA. L. (Common G.) July—Sept. 4

Common in dry sandy, heathy, and shady situations. Very abundant on Trammere Heath, and similar situations in Wirral.

"*Cucullia Asteris* (the Starwort Moth) and *Lycana Virgaureæ* (the Scarce Copper) feed upon this plant."

THE FLORA OF LIVERPOOL.

31. SENECIO. Linn. *Groundsel, Ragwort, Fleawort.*

1. S. VULGARIS. L. (Common G.) All the year. ☉

Waste ground, road sides, fields, &c., very common.

"The larvæ of *Agrotis exclamatoria* (the Heart and Dart), *Hadana contigua* (the Beautiful Brocade), *Arotia villosa* (the Cream-Spot Tiger), *Triphana pronuba* (the Great Yellow Underwing), feed on this species."

2. S. SYLVATICUS. L. (Mountain G.) July, Aug. ☉

Dry old hedge-banks, heaths, and gravelly pastures, very common.

3. S. TENUIFOLIUS. Jacq. (Hoary R.) July, Aug. 24

Woods, hedges, and road sides, very common.

4. S. JACOBÆA. L. (Common R.) July—September. 24

In old pastures, road sides, and especially on the sand hills, very abundant.

"The larvæ of *Callimorpha Jacobææ* (the Pink Underwing) and *Phragmatobia fuliginosa* (the Ruby Tiger) feed on it. The perfect moth of the former is found abundantly on the sand hills in May."

5. S. AQUATICUS. Huds. (Marsh R.) July, August. 24

Wet places, ditch sides, &c., very common.

6. S. PALUSTRIS. D.C. (*Cineraria palustris*. L.) (Marsh F.)

June, July. 24.

Stated (but I believe erroneously) by H. Aughton, to grow near Southport.

32. PULICARIA. Gærtn. *Flea-bane.*

1. P. DYSENTERICA. Cass. (*Inula dysenterica*. L.) (Common F.) July—September. 24

Moist places and ditch sides, common.

33. BELLIS. Linn. *Daisy.*

1. B. PERENNIS. L. (Common D.) March—October. 24

Pastures, &c., very common.

34. CHRYSANTHEMUM. Linn. *Ox-eye.*

1. C. LEUCANTHEMUM. L. (Great white O.) June, July. 24

Pastures and road sides, very common.

THE FLORA OF LIVERPOOL.

2. *C. SEGETUM*. L. (Corn Marigold, Yellow O.) June—October. ☉

Corn fields, but not very common.

35. *MATRICARIA*. Linn. *Wild Chamomile. Feverfew.*

1. *M. PARTHENIUM*. L. (*Pyrethrum Parthenium*. Sm.) (Common F.) July, Aug. 24

Hedge banks and waste places near farm houses, occasionally in Wirral, and near Liverpool.

2. *M. INODORA*. L. (Corn W. or Scentless Mayweed.) June—October. ☉

VAR. a. Hook. & Arnott. *PYRETHRUM INODORUM*. Sm.

Corn Feverfew.

Corn fields and waste places, very common.

VAR. b. Hook. & Arnott. *PYRETHRUM MARITIMUM*.

Sm. Seaside Feverfew.

Banks of the Mersey above Liverpool,—Sir J. E. Smith in *Eng. Fl.*, and in *Herb. Liv. Bot. Gard.* Between Speke Hall and Hale,—W.S. Along the shore at Aigburth, not uncommon,—W.H. Also along the coast occasionally, both in Wirral and Lancashire, Crosby, Formby, Southport, &c.

3. *M. CHAMOMILLA*. L. (Wild C.) June—August. ☉

Fields, waste places, road sides, common.

36. *ANTHEMIS*. Linn. *Chamomile.*

1. *A. COTULA*. L. (Stinking C.) June—August. ☉

Waste places and corn fields. Stated by Mr. H. Aughton to grow at Southport, but this requires confirmation.

37. *ACHILLÆA*. Linn. *Yarrow, Milfoil.*

1. *A. PTARMICA*. L. (Sneezewort Y.) July, August. 24

Pastures and way sides, common.

2. *A. MILLEFOLIUM*. L. (Common Y.) June—Sept. 24

Pastures and way sides, very common.

"The larva of *Aspilates gilvaria* (the Straw Belle) feeds on this plant."

THE FLORA OF LIVERPOOL.

ORD. XLIII. CAMPANULACEÆ. Juss.

The Bell-flower Family.

1. CAMPANULA. Linn. *Bell-flower.*

Pentand. Monogyn. Linn.

1. C. ROTUNDIFOLIA. L. (Round-leaved B. or Hair-bell.)

July—September. 4

Dry fields, road sides, hedge banks, and the sand hills, frequent. Occasionally with white flowers.

2. C. LATIFOLIA. L. (Giant B. or Throat-wort.) June—

September. 4

Woods, hedge banks, and borders of fields. Near Wavertree. Abundant in a wood near Roby Hall, and in a wood near Deysbrook,—W.H. It formerly grew near Woodside.

3. C. HEDERACEA. L. (*Wahlenbergia hederacea.* Riech.)

(Ivy-leaved B.) July. 4

Upholland Moor, 1850,—John Harrison.

2. JASIONE. Linn. *Sheep's-bit.*

Pentand. Monogyn. Linn.

1. J. MONTANA. L. (Annual S. or Scabious.) June—

September. ♂ or ♂

On the sand hills along the coast, abundant; also inland, in dry, gravelly, and heathy situations.

ORD. XLIV. VACCINIACEÆ. De Cand.

The Whortleberry Family.

1. VACCINIUM. Linn. *Whortleberry.*

Octand. Monogyn. Linn.

1. V. MYRTILLUS. L. (Common W. or Bilberry.) April—

June. ½

Woods and heathy places. Near Bidston Stone Quarry. Plentiful on hedge banks near Thornton,—W.S. Common on hedge banks in Knowsley, Kirby, and Simmons-wood,—W.H.

"The larvæ of *Glaea Vaccinii* (the Cheanut), *Acronycta auricornia* (the Scarce Dagger), and *Acronycta Euphrasia* feed on this plant."

THE FLORA OF LIVERPOOL.

2. V. VITIS IDÆA. L. (Red W. or Cow-berry.) May,
June ½
Side of Bidston Stone Quarry, scarce.
3. V. OXYCOCOS. L. (Marsh W. or Cranberry.) June. ½
Plentiful on the north side of Simmons-wood Moss,—
W.H. Plentiful on Sutton Moss,—J. Harrison. South-
port,—H. Aughton.

SUB-CLASS III. COROLLIFLORÆ.
(Ord. xlv—lxii.)

A. Stamens free from the Corolla. (Ord. xlv—xlvii.)

ORD. XLV. ERICACEÆ. JUSS.
The Heath Family.

1. ERICA. Linn. *Heath. Octand. Monogyn.* L.
1. E. TETRALIX. L. (Cross-leaved H.) July, Aug. ½
Common on heathy and moory grounds. Bidston and
Oxton heaths. Heswall, Simmons-wood Moss, Formby,
Southport, &c. A white variety is occasionally met with
in the above localities, as well as of the following species.
2. E. CINEREA. L. (Fine-leaved H.) July—September. ½
On heathy moory ground, as above, common.
2. CALLUNA. Salisb. *Ling. Octand. Monogyn.* L.
1. C. VULGARIS. Salisb. (*Erica vulgaris.* L.) (Common
Ling.) June—Aug. ½
Heaths and moory grounds, abundant.
“*Saturnia Pavonia-minor* (the Emperor), *Anarta Myrtilli* (the Beautiful Yellow
Underwing), *Scotophila porphyrea* (the True Lover's Knot), and *Acronycta auricoma*
are found on this plant.”
3. ANDROMEDA. Linn. *Andromeda.*
Decand. Monogyn. L.
1. A. POLIFOLIA. L. (Marsh A.) May—August. ½
Simmons-wood Moss, abundant,—W.H. Kirby Moss,—
Mr. Price. Chat Moss, Bickerstaffe Moss, &c.

THE FLORA OF LIVERPOOL.

ORD. XLVI. PYROLACEÆ. Lindl.

The Winter-green Family.

1. PYROLA. Linn. *Winter-green. Decand. Monogyn.* L.
1. P. ROTUNDIFOLIA. L. (Round-leaved W.) July—
September. 24
Southport.

ORD. XLVII. MONOTROPACEÆ. Nutt.

The Bird's Nest Family.

1. MONOTROPA. Linn. *Bird's Nest. Decand. Monogyn.* L.
1. M. HYPOPITYS. L. (Yellow B.) June, July. 24
Abundant, near the old Warren House, on Crosby sand
hills,—W.S. Southport.

B. Stamens inserted upon the Corolla.
(Ord. xlviii—lxii.)

ORD. XLVIII. AQUIFOLIACEÆ. De Cand.

The Holly Family.

1. ILEX. Linn. *Holly. Tetrand. Tetragyn.* L.
1. I. AQUIFOLIUM. L. (Common H.) May, June. 2
In hedges and woods, frequent.

ORD. XLIX. OLEACEÆ. R. Br.

The Olive Family.

1. LIGUSTRUM. L. *Privet. Diand. Monogyn.* L.
1. L. VULGARE. L. (Common P.) June, July. 2
In hedges and plantations occasionally, but scarcely to be
considered indigenous.

"The larvæ of *Sphinx Ligustri* (the Privet Hawk), *Acronycta Ligustri* (the Dark
Coronet), and *Petasia Cassina* (the Sprawler), feed on this plant."

THE FLORA OF LIVERPOOL.

2. FRAXINUS. Linn. *The Ash. Diand. Monogyn. L.*

1. F. EXCELSIOR. L. (Common Ash.) April, May. ½

Very common in woods and hedges.

"*Ips quadripustulata* and *quadripunctata* may be found on the stumps the summer following the felling of the trees. The larvæ of *Dorcas parallelipipedus*, *Sinodendron cylindricum*, and *Apion vorax* feed on old ash trees. The larvæ of the following Lepidoptera feed on the leaves:—*Lasiocampa Quercus* (the Great Egger), *Hypercompe Dominula* (the Scarlet Tiger), *Lithosia complena* (the Footman), and *Apatela Aceris* (the Sycamore Tussock)."

ORD. L. APOCYNACEÆ. Juss.

The Dogbane Family.

1. VINCA. Linn. *Periwinkle. Pentand. Monogyn. L.*

1. V. MINOR. L. (Lesser P.) May, June. ¼

Woods and hedge banks. In a hedge near the "Three-Sixes," Toxteth Park. In profusion at the Nut woods, Hale,—Dr. Bostock, *in With.* Plentiful in an old hedge near the "Nook-House," West Derby,—W.H. Plentiful in a wood near the shore, opposite Speke Hall,—W.S. In none of these cases, I believe, to be considered otherwise than introduced.

ORD. LI. GENTIANACEÆ. Juss.

The Gentian Family.

A. "*Leaves opposite. Corolla twisted in æstivation.*"
(GENTIANEÆ.)

1. ERYTHRÆA. Rencalm. *Centaury.*

Pentand. Monogyn. L.

1. E. CENTAURIUM. Pers. (Common C.) June—Aug. ☉

Pastures and way sides, common. On the sand hills it is found, occasionally, with white flowers.

2. E. PULCHELLA. Fries. (Dwarf-branched C.) August, September. ☉

Seaforth common, now nearly obliterated by cultivation. In grassy spots among the sand hills between Bootle and Crosby, and at Formby and Southport, not uncommon. Among the sand hills at New Brighton and Hoylake, rare, —W.S.

THE FLORA OF LIVERPOOL.

3. E. LATIFOLIA. Sm. (Broad-leaved tufted C.) July,
August. ☉

Seaforth common, now rare, as also among the Bootle sand hills. About Crosby, not uncommon,—T. Sansom.

4. E. LINARIFOLIA. Pers. (*Erythræa* or *Chironia littoralis*.)
(Dwarf-tufted C.) June—August. ☉

Seaforth common, now rare. Among the sand hills at New Brighton, Crosby, Formby, and Southport.

2. GENTIANA. Linn. *Gentian*. *Pentand. Digyn.* L.

1. G. PNEUMONANTHE. L. (Marsh G.) Aug., Sept. 24

Abundant on moist moory grounds, at Orrell, Crosby, Formby, Southport; and also in Wirral, at Bidston and Oxtan heaths. Heswall hills and along the banks of the Dee.

2. G. AMARELLA. L. (Small-flowered G.) June—Sept. ☉

Moist meadows, New Brighton. Heswall hills,—Miss E. Potts. Not uncommon on poor land about Crosby, Formby, and Southport.

3. G. CAMPESTRIS. L. (Field G.) August—October ☉

Dry sandy pastures along the coast, from Hoylake to Southport, abundant.

3. CHLORA. Linn. *Yellow-Wort*. *Octand. Monogyn.* L.

1. C. PERFOLIATA. L. (Perfoliate Y.) July—Sept. ☉

Sand hills along the coast, from Hoylake to Southport. Frequent on the banks of the Mersey, from the Dingle to Hale. Also near the Railway at Roby, and poor pastures near the "New Hut," Hale,—W.H.

B. "*Leaves alternate. Corolla induplicate in æstivation.*"
(MENYANTHACEÆ. Auctor.)

1. MENYANTHES. Linn. *Buckbean*. *Pentand. Monogyn.* L.

1. M. TRIFOLIATA. L. (Buckbean or Marsh Trefoil.)

May—July. 24

Marshy and boggy ground and pits. Frequent in pits about Knowsley and Fazakerley,—W.H. Also very frequent in pits in Wirral, as at Bebbington, Sutton, Hoylake, &c. Common in Crosby, and Formby marshes,—W.S. Southport.

Acronycta Menyanthesidis (the Light Knotgrass) is found on this plant.

THE FLORA OF LIVERPOOL.

ORD. LII. CONVULVULACEÆ. JUSS.

The Bindweed Family.

1. CONVULVULUS. Linn. *Bindweed.*

Pentand. Monogyn. L.

1. C. ARVENSIS. L. (Small B.) June, July. 24

Corn fields and pastures, common.

The larvae of *Sphinx Convolvuli* (the Convolvulus Hawk), *Erastria Sulphurea* (the Spotted Sulphur), and *Caradrina Sepii* (the Mottled Rustic), feed on this plant.

2. CALYSTEGIA. B. Br. *Calystegia, Hooded Bindweed.*

Pentand. Monogyn. L.

1. C. SEPIUM. Br. (*Convolvulus sepium. L.*) (Great C. or H.) June—August. 24

In woods and hedges, not uncommon, both in Wirral and Lancashire.

2. C. SOLDANELLA. Br. (*Convolvulus S. L.*) (Sea-side C.) June—August. 24

Lately very abundant near Bootle Land Marks, but now becoming rapidly eradicated. Sandy fields between Crosby and Southport, not uncommon.

3. CUSCUTA. Linn. *Dodder. Pentand. Digyn. L.*

1. C. EPITHYMUM. L. (Lesser D.) July—October. ☉

Parasitic on heath at Bidston Hill.

2. C. TRIFOLI. Bab. (Clover D.) July, August. ☉

On clover, Hale, 1850,—John Harrison.

ORD. LIII. BORAGINACEÆ. De Cand.

The Borage Family.

Pentand. Monogyn. Linn.

1. ECHIUM. Linn. *Viper's Bugloss.*

1. E. VULGARE. L. (Common V.) June, July. ♂

Sand hills at Crosby, Formby, and Southport, common.

THE FLORA OF LIVERPOOL.

2. LITHOSPERMUM. Linn. *Gromwell*.

1. L. OFFICINALE. L. (Common G.) June. 24
Amongst furze, between Wallasey and New Brighton, not abundant. Swampy places amongst the sand hills, at Little Crosby, rare,—W.S.
2. L. ARVENSE. L. (Corn G. or Bastard Alkanet.) May, June. ☉
Corn fields and waste grounds. Allerton,—J.S. in *Herb. Lanes* near Bidston Stone Quarry, rare. In corn fields near Gillmoss Chapel, rare,—W.S.

3. MYOSOTIS. Linn. *Scorpion-grass*.

1. M. PALUSTRIS. With. (Creeping Water S. or Forget-me-not.) June—August. 24
Ditches and swampy places, abundant.
2. M. REPENS. Don. (Creeping Water S.) Summer. 24
Wet boggy ground and ditch sides. Crosby and Formby, not uncommon.
3. M. CÆSPITOSA. Schultz. (Tufted water S.) May, June. ☉ or ♂
Watery places and ditches, not uncommon either in Wirral or Lancashire.
4. M. ARVENSIS. Hoffm. (Field S.) June—Aug. ☉ or ♂
Common on cultivated and waste ground.
5. M. COLLINA. Hoffm. (Early Field S.) April, May. ☉
Sand hills on the coast, from the Dee to Southport, and dry hedge banks in Wirral, plentiful.
"The larva of *Deiopeia pulchella* (the Crimson Speckled) feeds on this species"
6. M. VERSICOLOR. Lehm. (Yellow and Blue S.) April—June. ☉
In meadows, and where water has stood during the winter, common.

4. ANCHUSA. Linn. *Alkanet*.

1. A. SEMPERVIRENS. L. (Evergreen A.) May, June. 24
Abundant in a field near Parkfield. Plentiful in a field at the back of Walton Hall,—W.H. In both cases, doubtless, introduced.

THE FLORA OF LIVERPOOL.

5. LYCOPSIS. Linn. *Bugloss.*

1. L. ARVENSIS. L. (Small B.) June, July. ☉

Sand hills along the coast, from the Dee to Southport, very common; and occasionally on waste ground inland.

6. SYMPHYTUM. Linn. *Comfrey.*

1. S. OFFICINALE. L. (Common C.) May, June. 4

Abundant in hedge banks near Hoylake,—W.S. On the banks of a muddy ditch by the side of a footpath, leading from Green Lane to Mill Bank. West Derby,—W.H. Near Wallasey Church,—T. Glover, in *Hall's Flora*. Southport,—H. Aughton.

7. CYNOGLOSSUM. Linn. *Hound's Tongue.*

1. C. OFFICINALE. L. (Common H.) June, July. ♂

Sand hills on the coast, from the Dee to Southport, abundant.

"The larvæ of *Hypercompe Dominula* (the Scarlet Tiger), *Euthemonia Russula* (the Clouded Buff), and *Nania typica* (the Gothic), feed on this plant."

ORD. LIV. SOLANACEÆ. JUSS.

The Nightshade Family.

Pentand. Monogyn. Linn.

1. DATURA. Linn. *Thorn-Apple.*

1. D. STRAMONIUM. L. (Common T.) July—October. ☉

Occasionally met with on waste ground near houses, as at Aigburth and Woodside, but in all these cases introduced.

2. HYOSCYAMUS. Linn. *Henbane.*

1. H. NIGER. L. (Common H.) June—Aug. ☉ or ♂

Sand hills about Crosby and Formby, abundant; also at Southport and New Brighton. Plentiful about Hoylake,—W.H. Sparingly in Wallasey Church yard. Abundant along the shore at Parkgate,—W.S.; and Heswall,—T. Sansom.

"*Corizus Hyoscyami* (a species of Wood Bug) and the larva of *Euchlidia glyphica* (the Burnet) are found upon this plant."

THE FLORA OF LIVERPOOL.

3. SOLANUM. Linn. *Nightshade.*

1. S. DULCAMARA. L. (Woody N. or Bittersweet.) June,
July. ½

Hedges and shady places, common in Wirral and Lancashire.

The *Acherontia Atropos* (the Death's-Head Moth) is occasionally found on this species.

2. S. NIGRUM. L. (Common or Garden N.) June—Sept. ○
In waste and cultivated ground, frequent.

ORD. LV. OROBANCHACEÆ. Vent.

The Broom-rape Family.

1. OROBANCHE. Linn. *Broom-rape.*

1. O. MAJOR. L. (?) Sm. (Greater B.) May—July. ¼

Parasitic on gorze and other leguminous plants. Clover field at Hale (1850), and at Billinge Beacon (1849 and 1850),—J. Harrison. Among gorze bushes at Allerton,—Mr. R. Roscoe, *in With.*, and H. Shepherd, *in Hall's Flora*. Fresh specimens, from Mr. John Harrison, were sent to me in 1849 and 1850, gathered at Speke Hall, and marked *O. caryophyllacea*, which, as far as I could judge, were varieties of *O. major*.

ORD. LVI. SCROPHULARIACEÆ. JUSS.

The Figwort Family.

A. Stamens 2. (Gen. 1.) *Diand. Monogyn.* L.

1. VERONICA. Linn. *Speedwell.*

1. V. SERPYLLIFOLIA. L. (Thyme-leaved S.) May—July. ¼

Pastures and road sides, frequent.

2. V. SCUTELLATA. L. (Marsh S.) July, August. ¼

By the side of ponds and in wet places, but not common. In a ditch by the side of a lane leading from Little Crosby to the sand hills,—W.S. Ditches at Formby and Southport. South end of Wavertree, and about Bootle Land Marks,—J.S. *in With.* Pit on road side between Bebbington Church and Clatterbridge. Near Hale, and West Derby. Little Sutton,—R. Slack. New Brighton,—A. Higginson.

THE FLORA OF LIVERPOOL.

3. V. ANAGALLIS. L. (Water S.) July, August. 24
In ditches and wet places, frequent.
4. V. BECCABUNGA. L. (Brooklime.) May—October. 24
In ditches and wet places, very common.
5. V. OFFICINALIS. L. (Common S.) May—July. 24
Dry barren pastures and way sides, very common.
6. V. MONTANA. L. (Mountain S.) April—July. 24
In moist woods and shady places, frequent. Eastham and Bromboro' woods,—W.S. Croxteth woods,—W.H.
7. V. CHAMÆDRYS. L. (Germander S.) May—July. 24
Shady places, hedge banks and pastures, common.
8. V. HEDERIFOLIA. L. (Ivy-leaved S.) April—June. ☉
Hedge banks, common.
9. V. AGRESTIS. L. (Green procumbent Field S.) April—September. ☉
In fields and waste places, common.
10. V. ARVENSIS. L. (Wall S.) April—September. ☉
Walls and hedge banks, common.

B. Stamens didynamous. (Gen. 2—10.)

Didynam. Angiosperm. Linn.

2. BARTSIA. Linn. *Bartsia*.

1. B. VISCOSA. L. (Yellow viscid B.) June—October ☉
Sandy fields about Bootle, Crosby, Formby, and Southport. The sand hills from Hoylake to New Brighton, frequent. Also in a lane near Sefton,—Mr. Bean, and near Thornton, Ormskirk, &c.
2. B. ODONTITES. Huds. (Red B.) July, August. ☉
Barren pastures, corn fields, and way sides, very common. Occasionally it is found with white flowers.

3. EUPHRASIA. Linn. *Eye-Bright*.

1. E. OFFICINALIS. L. (Common E.) May—Sept. ☉
Pastures and waste places, common.
Acronycta Euphrasii feeds on this plant.

THE FLORA OF LIVERPOOL.

4. RHINANTHUS. Linn. *Yellow-rattle*.

1. R. CRISTA-GALLI. L. (Common Y.) May—July. ☉
Meadows and pastures, very abundant.

5. MELAMPYRUM. Linn. *Cow-wheat*.

1. M. PRATENSE. L. (Common Yellow C.) July, Aug. ☉
In woods and shady places, not common.
2. M. SYLVATICUM. L. (Lesser-flowered Yellow C.) July. ☉
Stated by Mr. John Harrison to grow at Sutton, near St. Helens, and by Mr. H. Aughton, to grow near Southport. There are specimens also in the Herbarium of the Liverpool Botanic Garden, gathered in Cheshire, and marked *M. Sylvaticum* (?) In all these cases, doubtless, it has been mistaken for *M. pratense*.

6. PEDICULARIS. Linn. *Louse-wort*.

1. P. PALUSTRIS. L. (Marsh L.) May—Sept. ☉ or 24
Marshy places and wet pastures, common.
2. P. SYLVATICA. L. (Pasture L.) April—July. 24
Wet pastures and heaths, common.

7. SCROPHULARIA. Linn. *Figwort*.

1. S. NODOSA. L. (Knotted F.) June—August. 24
Moist woods and shady ditches, common.
2. S. AQUATICA. L. (*S. Balbisii*. Hornem.) June—September. 24
Sides of pits and wet places, common.
"The larva of *Gortyna flavago* (the Frosted Orange) feeds on the pith; *Cucullia Scrophulariae* (the Water Betony) feeds upon the plant"

8. ANTIRRHINUM. Linn. *Snapdragon*.

1. A. MAJUS. L. (Great S.) July—September. 24
Both the purple and white varieties grow abundantly on an old wall near Broad Green; also on an old brick wall near Wavertree Lake. In both cases, most probably, it has escaped from some garden,—W.H.

THE FLORA OF LIVERPOOL.

9. LINARIA. Juss. *Toadflax*.

1. L. CYMBALARIA. Mill. (Ivy-leaved T.) May—Sept. 4

On old walls, but the outcasts of gardens. About Hooton Hall, abundant,—W.S. On each side of the Railway cutting at Olive Mount, abundant,—W.H. Near Wavertree Lake. Old walls at West Derby,—T. Sansom. Sutton,—F. P. Marratt.

2. L. VULGARIS. Mœnch. (*Antirrhinum Linaria*. L.)
(Yellow T.) June—September. 4

Hedge banks and waste grounds, frequent on both sides of the Mersey.

"The larva of *Colophasia Linariae* feeds upon the flowers."

3. L. ELATINE. Desf. (Sharp-pointed Fluellen or T.)
July—October. ☉

About Parkgate, rare,—T. Sansom. Doubtless an outcast from some garden,—J.D.

10. DIGITALIS. Linn. *Foxglove*.

1. D. PURPUREA. L. (Purple F.) June—August. ♂

In dry hedge banks and shady situations, frequent.

C. Stamens 5. (*Gen.* 11.)

11. VERBASCUM. Linn. *Mullein*. *Pentand. Monogyn.* L.

1. V. THAPSUS. L. (Great Mullein.) July, August. ♂

Banks and waste grounds, not unfrequent in Wirral. Hedges and road sides near Hoylake, frequent,—W.H. Along Parkgate shore, abundant,—W.S. Southport,—H. Aughton.

"The larvæ of the following Moths feed upon it:—*Cucullia Scrophularia* (the Water Betony), *Cucullia Verbasci* (the Mullein), *Polia bimaculosa* (the Grey Arches), and *Gortyna flavago* (the Frosted Orange)."

THE FLORA OF LIVERPOOL.

ORD. LVII. LABIATÆ. JUSS.

The Labiate Family.

A. *Stamens* 2. (*Gen.* 1, 2.) *Diand. Monogyn.* L.

1. LYCOPUS. Linn. *Gipsy-wort.*

1. L. EUROPEUS. L. (Common G.) June—Sept. 24

By the sides of ponds and in moist places, frequent both in Wirral and Lancashire.

2. SALVIA. Linn. *Sage* or *Clary.*

1. S. VERBENACA. L. (Wild English S. or C.) June—August. 24

About West Kirby, on banks, rare,—W.S., J.D.

B. *Stamens* 4. (*Gen.* 3—18.)

Didynam. Gymnosperm. Linn.

TRIBE 1. MENTHOIDEÆ. Hook. & Arnott.

“Tube of the corolla scarcely longer than the calyx, its limb 4—5 cleft, nearly regular. Stamens diverging upwards.” (*Gen.* 3.)

3. MENTHA. Linn. *Mint.*

1. M. PIPERITA. Sm. (Pepper M.) Aug., Sept. 24

Watery places; occasionally met with near farm houses, but always the outcasts of gardens. Near the “Swan,” by Liverpool,—J.S. *in Herb.* In rivulets (in Cheshire),—B.G. Near Gill Moss Chapel.

2. M. AQUATICA. L. (Water capitate M.) Aug., Sept. 24

VAR. a. Hook. & Arnott. M. HIRSUTA. L. “Leaves pubescent, calyx and pedicels hairy.”

By the side of ditches and in watery places, common.

THE FLORA OF LIVERPOOL.

3. *M. SATIVA*. L. (Marsh whorled M.) September. 24
 VAR. b. Hook. & Arnott. *M. RUBRA*. Sm. "Whole plant nearly glabrous, pedicels and lower part of the calyx quite glabrous."
 Wet places, ditch sides, &c., not uncommon. Eastham wood, plentiful; and at Oxton, Formby, Southport, &c.
4. *M. ARVENSIS*. L. (Corn M.) Aug., Sept. 24
 Corn fields and light sandy ground, common.
5. *M. PULEGIUM*. L. (Penny-royal.) Aug., Sept. 24
 New Brighton,—T. Sansom. I fear that we must consider it as introduced here from some garden.
- "No class of insects appears to be fond of any of the species of Mint. *Coleoptera* are very seldom seen near where Mint grows. The only Caterpillar I have seen feeding upon it is *Spilosoma papyrata* (the Water Ermine)."—BAINES.

TRIBE 2. SATUREINEÆ. Hook. & Arnott.

"Corolla two-lipped, the tube about as long as the calyx; lips nearly equal in length, upper one nearly plane. Stamens diverging, nearly equal, protruded." (*Gen.* 4, 5.)

4. *THYMUS*. Linn. *Thyme*.
1. *T. SERPYLLUM*. L. (Wild T.) June—August. 24
 Sand hills along the coast, abundant.
- VAR. b. Hook. & Arnott. *T. LANUGINOSUS*. Willd.
 "Leaves hairy or hoary."
 Not unfrequent on the sand hills.
5. *ORIGANUM*. Linn. *Marjoram*.
1. *O. VULGARE*. L. (Common M.) July, September. 24
 Between Seacombe and Poulton, near the wooden bridge, in hedge banks. Abundant on hedge banks between Buckley Hill School and Sefton Church,—W.S.

THE FLORA OF LIVERPOOL.

TRIBE 3. AJUGOIDEÆ. Hook. & Arnott.

"Corolla irregular; upper lip abbreviated or apparently wanting.
Stamens much exserted, didynamous, parallel, ascending;
the two lower ones the longest." (*Gen.* 6, 7.)

6. TEUCRIUM. Linn. *Germander*.

1. T. SCORODONIA. L. (Wood G.) July, August. 24
Dry heathy old hedge banks and stony places, common.

7. AJUGA. Linn. *Bugle*.

1. A. REPTANS. L. (Common B.) May, June. 24
Moist pastures, woods, and hedge sides, common. A
white variety is occasionally met with.

TRIBE 4. NEPETEÆ. Hook. & Arnott.

"Corolla two-lipped: Stamens ascending or converging, shorter
than the upper lip." (*Gen.* 8—18.)

8. BALLOTA. Linn. *Horehound*.

1. B. NIGRA. L. (Black H.) June—October. 24
Hedges and waste places, common.
"The larvae of *Anarta Hellaca* (the Small Yellow Underwing) and *Apion vernalis*
are found on this plant."

9. LEONURUS. Linn. *Motherwort*.

1. L. CARDIACA. L. (M.) July—September. 24
Southport,—H. Aughton. I believe this to have been
introduced.

10. GALEOPSIS. Linn. *Hemp-nettle*.

1. G. LADANUM. L. (Red H.) September, October. ☉
Dry banks, Cheshire,—H. Shepherd, in *Hall's Flora*.
Frequent in gravelly places about Mill-bank, West Derby,
—W.H.
2. G. TETRAHIT. L. (Common H.) July—September. ☉
Cultivated fields and waste ground, very common.
3. G. VERSICOLOR. Curt. (Large-flowered H.) July, Aug. ☉
Corn fields, but not very common. West Derby,—W.S.
and W.H. Simmons-wood Moss,—W.H. About Sutton,
not rare. Also in corn fields at Ford, Woodside, Parkgate,
Southport, &c.

THE FLORA OF LIVERPOOL.

11. LAMIUM. Linn. *Dead-nettle*.

1. L. ALBUM. L. (White D.) June, July. 24
Borders of fields and road sides. Fields near Aintree Race Course,—W.S. Road side near Gill Moss Chapel. Road sides near Croxteth Hall, very common,—W.H. Also at Aigburth, Walton, Eastham, Crosby, Southport, &c.
“The larva of *Plusia Iota* (the Golden Yellow) feeds on this plant.”
2. L. PURPUREUM. L. (Red D.) May—September. ☉
Waste ground, borders of fields, and hedge sides, very common.
3. L. INCISUM. Willd. (Cut-leaved D.) April—June.
In similar situations to the preceding, but less common.
4. L. AMPLEXICAULE. L. (Henbit-Nettle.) April—Aug. ☉
In similar situations to the preceding, frequent.

12. BETONICA. Linn. *Betony*.

1. B. OFFICINALIS. (Wood B.) June—August. 24
In woods and shady places, frequent in Wirral; less so in Lancashire.

13. STACHYS. Linn. *Woundwort*.

1. S. SYLVATICA. L. (Hedge W.) July, August. 24
In hedges and shady places, common.
2. S. PALUSTRIS. L. (Marsh W.) July, August. 24
Ditches and watery places, frequent.
3. S. ARVENSIS. L. (Corn W.) April—October. ☉
Dry sandy, waste, and cultivated grounds, frequent.

14. NEPETA. Linn. *Cat-Mint, Ground-Ivy*.

1. N. CATARIA. L. (Cat-Mint.) July—September. 24
Hedges and waste places. Found at Sutton Bridge, Frodsham, 1850, by John Harrison; and near Oxtton, by Mr. Maughan. Yet I fear that both these habitats require confirmation; and the species has not been found in any other locality hereabouts after the most diligent search.

THE FLORA OF LIVERPOOL.

2. N. GLECHOMA. Benth. (*Glechoma hederacea*. L.)

(Ground-Ivy.) April, May. 24

Hedges and shady places, very common.

15. MARRUBIUM. Linn. *White Horehound*.

1. M. VULGARE. L. (Common White H.) Aug., Sept. 24

Waste places and way sides. Near Bootle,—R. Tudor. Southport,—H. Aughton. In both cases, doubtless, introduced, as well as at Little Sutton, Wallasey, and Tranmere.

16. CALAMINTHA. Mœnch.

Calaminth, Basil-Thyme, Wild-Basil.

1. C. OFFICINALIS. (*Melissa Cal.* L.) (Common C.) July—

Sept. 24

Bidston Churchyard, scarce,—W.S. Near Thornton, scarce,—W.S. Near Bromboro', scarce,—W. Bean. Near Garston,—H. Shepherd, in *Hall's Flora*. In a lane leading from Claughton Hall to Bidston.

2. C. CLINOPIDIUM. Benth. (Common W.) July—Sept. 24

In shady lanes and hedge sides, not unfrequent. Abundant by the river side near Speke Hall, and near Bromboro' Pool,—W.S. Hale Dam wood.

17. PRUNELLA. Linn. *Self-heal*.

1. P. VULGARIS. L. (Common S.) July, August. 24

Meadows, pastures, and road sides, very common. Occasionally found with white flowers, on both sides of the Mersey.

18. SCUTELLARIA. Linn. *Skull-cap*.

1. S. GALERICULATA. L. (Common S.) July, August. 24

Marshy places and ditch sides. Swampy places among Crosby sand hills, abundant,—W.S. Ditch side near a path-way from Tue Brook to West Derby,—W.H. Upper part of Bromboro' Pool,—T. Sansom. Southport,—H. Aughton.

2. S. MINOR. L. (Lesser S.) July—October. 24

Formby,—T. Glover, in *Hall's Flora*. Cheshire,—J. Bowman, MS. in *New Bot. Guide*.

THE FLORA OF LIVERPOOL.

ORD. LVIII. VERBENACEÆ. Juss.

The Vervain Family.

1. VERBENA. Linn. *Vervain. Didynam. Angiosperm. L.*

1. V. OFFICINALIS. L. (Common V.) July, August. 24

Road sides and waste ground. Common by the road sides about Hoylake,—W.S. Frequent about Neston and Roby,—J. Sk. Hale,—J. Harrison. Hoylake,—J.S. in *Herb.* Plentiful about Sutton and between Bebbington and Tralgar. Near Southport.

ORD. LIX. LENTIBULARIACEÆ. Rich.

The Butterwort Family.

Diand. Monogyn. Linn.

1. PINGUICULA. Linn. *Butterwort.*

1. P. VULGARIS. L. (Common B.) May—July. 24

Bogs and moist heaths. Thornton Hough, Cheshire,—J. Harrison. Plentiful on some marshy ground on the hill, east of Thurstaston,—W.S. Southport,—H. Aughton.

2. UTRICULARIA. Linn. *Bladderwort.*

1. U. VULGARIS. L. (Greater B.) June, July. 24

Ponds about Woodside, and in other parts of Wirral, not unfrequent. Bootle,—R. Tudor. In the canal, between Crosby and Litherland. Frequent in Formby and Altcar marshes,—W.S., and near Southport.

2. U. MINOR. L. (Lesser B.) June—September. 24

Sparingly near Bootle and Little Crosby,—Dr. Bostock in *With.* In the canal between Crosby and Litherland,—H. Shepherd, in *Hall's Flora.* In the canal, and in a rill by the side of it, near Seaforth,—A. Murray, in *Hall's Flora.* Sutton Moss,—J. Harrison. Not unfrequent in Altcar and Formby Marshes,—W.S. Chat Moss,—R. Tudor. Southport,—H. Aughton.

THE FLORA OF LIVERPOOL.

ORD. LX. PRIMULACEÆ. Vent.

The Primrose Family.

Pentand. Monogyn. Linn.

A. HOTTONIÆ. Hook. & Arnott.

“Capsule superior, opening by valves which remain connected at the apex. Seeds with the hilum at the base, and an erect embryo.” (*Gen.* 1.)

1. HOTTONIA. Linn. *Water-Violet.*

1. H. PALUSTRIS. L. (Common W. or Featherfoil.) May, June. 24

Not unfrequent in ponds in Wirral and Lancashire. Abundant near Bebbington. In ditches about Bootle, Crosby, Litherland, Sefton, Formby, and Southport.

B. PRIMULÆ. Hook. & Arnott.

“Capsule superior, opening at the apex by valves or teeth. Seeds peltate; embryo transverse.” (*Gen.* 2—4.)

2. PRIMULA. Linn. *Primrose, Oxlip, Cowslip.*

1. P. VULGARIS. Huds. (Common P.) March—May. 24
Woods, hedge banks, and pastures, abundant.

2. P. VERIS. L. (Common C. or Paigle.) March—May. 24
Meadows and pastures, abundant in some localities. Meadows and pastures near Bebbington, Tranmere, Little Sutton, Wallasey, Hoylake, Sefton, Formby, and Southport. Amongst gorze bushes near New Brighton.

3. GLAUX. Linn. *Sea-Milkwort.*

1. G. MARITIMA. L. (Sea M. or Black Saltwort.) May—July. 24

Sea shore, from Hoylake to Southport, and muddy inlets of the Mersey, as at Bromboro' and Wallasey Pools, Garston, Hale, &c., common.

THE FLORA OF LIVERPOOL.

4. LYSIMACHIA. Linn. *Loose-strife*.

1. L. VULGARIS. L. (Great Yellow L.) July, August. 24

Wet hedge banks, and ditch sides frequent. In woods near Stop-gate between Croxteth and Knowsley Halls, abundant. By the side of some large ponds near Child-wall Church, abundant,—W.H. In ditches near Bootle, Crosby, Litherland, Sefton, Formby, and Southport. Also in Wirral, as at Bebbington, &c.

2. L. NEMORUM. L. (Yellow Pimpernel or Wood L.)

May—August. 24

Woods and bushy places, common.

3. L. NUMMULARIA. L. (Creeping L., Money-wort, or Herb-Twopence.) June, July. 24

In a boggy place near Garston.—H. Shepherd, in *Hall's Flora*. On a hedge bank by the side of an unpaved, sandy lane, leading from near Knowsley Old Chapel towards Simmons-wood Moss. Abundant in a wood near the top of Jack Lane, West Derby,—W.H.

C. ANAGALLIDÆ. Hook. & Arnott.

“Capsule superior, opening transversely.” (*Gen.* 5.)

5. ANAGALLIS. Linn. *Pimpernel*.

1. A. ARVENSIS. L. (Scarlet P. or Poor Man's Weather-Glass.) May—November. ☉

VAR. a. Hook. & Arnott. “Margin of the corolla crenate piloso-glandulose.”

Common in corn fields and waste places.

VAR. b. Hook. & Arnott. A. CÆRULEA. Schreb.

“Margins of the Corolla toothed, scarcely at all glandulose.”

Not uncommon in similar situations. Abundant near Egremont.

2. A. TENELLA. L. (Bog P.) July, August. 24

Common in boggy and moist places, both in Wirral and Lancashire, especially about Crosby, Formby, Southport, &c,

THE FLORA OF LIVERPOOL.

D. SAMOLEÆ. Hook. & Arnott.

"Capsule half-superior, opening by valves. Embryo transverse." (*Gen.* 6.)

6. SAMOLUS. Linn. *Brookweed*.

1. S. VALERANDI. L. (Brookweed or Water Pimpernel.)

June—September. 4

Marshy and moist places, not uncommon. Plentiful in marshy places amongst the sand hills of Crosby, Formby, and Southport. Also near Poulton and Bootle.

ORD. LXI. PLUMBAGINACEÆ. Juss.

The Leadwort Family.

Pentand. Pentagyn. Linn.

1. ARMERIA. Willd. *Thrift. Sea-Pink*.

1. A. MARITIMA. Willd. (*Statice Armeria.* L.) (Common

T. or S. or Sea-Gilliflower.) April—Sept. 4

The sea shore from the Dee to Southport. Abundant about the muddy inlets of the Mersey, as at Bromboro' and Wallasey Pools, Garston, &c.

"On this plant is found *Ino Statice* (the Green Forester)."

2. STATICE. Linn. *Sea-Lavender*.

1. S. LIMONIUM. L. (Spreading spiked S.) July, Aug. 4

Muddy inlets of the Mersey, as at Bromboro' and Wallasey Pools, Garston, &c., not uncommon.

2. S. SPATHULATA. Hook.

Stated as growing on Hilbre Island, in the New Bot. Guide, but it is not now found there.

THE FLORA OF LIVERPOOL.

ORD. LXII. PLANTAGINACEÆ. JUSS.

The Plantain Family.

1. PLANTAGO. Linn. *Plantain. Tetrand. Monogyn. L.*

1. P. MAJOR. L. (Greater P.) June—August. 24

Pastures, waste grounds, and road sides, abundant.

2. P. LANCEOLATA. L. (Ribwort P.) June, July. 24

Pastures, meadows, and road sides, abundant.

3. P. MARITIMA. L. (Sea-side P.) June—September. 24

Grassy places near the sea shore, from the Dee to Southport, occasionally. Abundant by the muddy inlets of the Mersey, as at Bromboro' and Wallasey Pools, Garston, Hale, &c.

4. P. CORONOPUS. L. (Buck's-horn P.) June, July. ☉

Gravelly and stony places upon the coast, from Hilbre Island and the Dee to Southport. Occasionally also found inland.

"Numerous insects are found upon the different species of Plantain; amongst them,—*Pamphila Paniseus* (the Chequered Skipper), *Euthemonia Russula* (the Clouded Buff), *Nemeophila Plantaginis* (the Wood Tiger), *Phragmatobia fuliginosa* (the Ruby Tiger), *Eulepia grammia* (the Feathered Footman), *Graphiphora erythrocephala* (the Barred Chesnut), *Mythimna grisea* (the Bright-eyed Clay), *Mythimna Lithargyria* (the Ochraceous Brown), *Grammesia trilinea* (the Equal Treble-lines), *Caradrina Plantaginis* (the Dotted Rustic), *Caradrina Alsines* (var.) (the Garden Rustic), *Mamestra Suasa* (the Dog's Tooth), *Xanthia flavago* (the Pink-barred Sallow), *Cidaria quadrifasciaria* (the Large Twin-spot), and *Orthosia macilenta* (the Yellow-line Quaker)."

2. LITTORELLA. Linn. *Shore-weed. Monœcia Tetrand. L.*

1. L. LACUSTRIS. L. (Plantain S.) June, July. 24

Watery, stony and sandy places. Abundant in wet places on Bidston Hill,—W.S. On the borders of a pond near Oxtou,—A. Murray, in *Hall's Flora*. Also in similar situations at Crosby, Formby, and Southport.

THE FLORA OF LIVERPOOL.

SUB-CLASS. IV. MONOCHLAMYDEÆ.

(Ord. lxiii—lxxvi.)

A. "*Barren flowers neither in catkins nor cones ; fruit not surrounded by a hardened or prickly involucre.*

Style or Stigma present."

(Ord. lxiii—lxxi.)

ORD. LXIII. CHENOPODIACEÆ. Juss.

The Goose-foot Family.

SUB-ORD. I. CYCLOLOBEÆ.

"Embryo annular, curved round the (usually) copious albumen."

TRIBE. 1. CHENOPODEÆ.

"Flowers uniform, mostly perfect. Stem continuous."

(Gen. 1.)

1. CHENOPODIUM. Linn. *Goose-foot.*

Pentand. Digyn. L.

1. C. MURALE. L. (Nettle leaved G.) Aug., Sept. ☉

Waste places, &c. ; not uncommon in Wirral, near villages, &c., as at Woodside, Egremont, Parkgate, Hoylake, &c. Also occasionally on the Lancashire side of the Mersey.

2. C. ALBUM. L. (White G.) July—September. ☉

Dunghills, waste places, &c., very common.

3. C. RUBRUM. L. (Red G.) August, September. ☉

Waste and cultivated ground, common.

4. C. Bonus HENRICUS. L. (Mercury G. or Good King Henry.) May—August. 24

Waste places and road sides, frequent near villages and farm houses, both in Wirral and Lancashire. Near Wallasey, Bidston, Eastham, &c. Also Walton, Wavertree, Roby, Allerton, &c.

THE FLORA OF LIVERPOOL.

TRIBE 2. ATRIPLICEÆ. L.

"Flowers imperfect. Stem continuous." (*Gen.* 2.)

2. ATRIPLEX. *Orache. Polygam. Monœc.* L.

1. A. PORTULACOIDES. L. (Shrubby O. or Sea Purslane.)

August—October. ☿

Muddy inlets of the Mersey, abundant.

2. A. LACINIATA. S. (Frosted Sea O.) July, August. ☉

Sea shore, Hoylake, Formby, Southport, &c.

3. A. ROSEA. L. (?) Bab. in E.B.S. (Spreading-fruited O.)

In similar situations to the above.

4. A. PATULA. L. (Spreading Halberd-leaved O.) June—October. ☉

Cultivated and waste ground inland, not uncommon; and frequent on Bromboro' and Wallasey Marshes. Southport,—H. Aughton.

"The larva of *Trachea atriplicis* (the Wild Arrach), feeds on this plant."

5. A. ANGUSTIFOLIA. Sm. (Spreading narrow-leaved O.)

July—September. ☉

Cultivated and waste ground, common.

6. A. LITTORALIS. L. (Grass-leaved Sea O.) July, Sept. ☉

Wallasey Pool, not rare. Near Eastham, abundant,—W.S. Southport,—H. Aughton.

3. SALICORNIA. Lin. *Glasswort. Monand. Monogyn.* L.

1. S. HERBACEA. L. (Jointed G.) July—September. ☉

Muddy shores of the Dee, the Mersey, and the Alt. Also at Southport, abundant.

THE FLORA OF LIVERPOOL.

SUB-ORD. II. SPIROLOBEÆ.

"Embryo spiral; albumen none, or in small quantity."

TRIBE 4. SUÆDEÆ.

"Seed with a double integument. Embryo in a flat spiral.
Stem continuous." (*Gen.* 4.)

4. SUÆDA. Forsk. *Sea-Blite.*

1. S. MARITIMA. Dumort. (*Chenopodium mar.* L.) (Annual S.) July—September. ☉

Muddy inlets of the Dee, the Mersey, and the Alt. Southport, &c., frequent.

TRIBE 5. SODEÆ.

"Seed with a single integument. Embryo in a conical spiral.
Stems continuous or jointed." (*Gen.* 5.)

5. SALSOLA. Linn. *Saltwort.*

1. S. KALI. L. (Prickly S.) July, August. ☉

On the shore, from the Dee to Southport, abundant.

ORD. LXIV. SCLERANTHACEÆ. Link.

1. SCLERANTHUS. Linn. *Knawel.* *Decand. Digyn.* L.

1. S. ANNUUS. L. (Annual K.) June, July. ☉

Corn fields, frequent.

THE FLORA OF LIVERPOOL.

ORD. LXV. POLYGONACEÆ. JUSS.

The Buckwheat Family.

1. POLYGONUM. Linn. *Persicaria*. *Bistort*. *Knot-grass*
and *Buckwheat*. *Octand*. *Trigyn*. L.

1. P. BISTORTA. L. (Common B. or Snakeweed.) June—
September. 24

Moist pastures and meadows, not unfrequent. In some low ground to the south east of Roby village, plentiful.—W.S. In a field near the bottom of the Botanic Garden, plentiful. Very abundant in the woods, immediately after passing the Stop-gate, between Croxteth and Knowsley Halls,—W.H. Fazakerley, plentiful,—R. Tudor. Also near Childwall, Hale, Southport, &c. Also occasionally met with in Wirral.

2. P. AVICULARE. L. (Common K.) May—Sept. ☉

Waste ground and roadsides, very common.

"The larva of *Aspilates purpuraria* (the Purple-barred Yellow), feeds on this plant."

3. P. ROBERTI. Lois. (*P. Ravi*. Bab. *P. maritimum*. Ray.)
(Roberts K.) July—September. ☉

Sea shore of Bootle and Crosby.

4. P. CONVULVULUS. L. (Climbing B.) July—Sept. ☉

Waste and cultivated (especially corn and potatoe) fields, common.

5. P. AMPHIBUUM. L. (Amphibious P.) July, Aug. 24

VAR. a. P. AQUATICUM. Hook. & Arnott. "Leaves floating broadly lanceolate glabrous, spikes oblong."

In the canal, and by the sides of ponds and ditches, common.

VAR. b. P. TERRESTRE. Hook. & Arnott. "Nearly erect, leaves narrow-lanceolate rough, with short appressed hairs on both sides, spikes ovate."

Moist places where water has stood during the winter, common.

6. P. PERSICARIA. L. (Spotted P.) July—October. ☉

Waste ground and wet places, common.

THE FLORA OF LIVERPOOL.

7. *P. LAPATHIFOLIUM*. L. (Pale-flowered P.) July—August. ☉
Dunghills and waste places, common.
8. *P. MINUS*. Huds. (Small creeping P.) Aug., Sept. ☉
Sides of ditches and moist gravelly places, not common.
Bidston Hill. Near Stourton Quarries.
9. *P. HYDROPIPER*. L. (Biting P.) July—September. ☉
By sides of ditches and wet places, very common.
"The larva of *Trachea Atriplicis* (the Wild Arrach) feeds on this plant."
2. *RUMEX*. Linn. *Dock* and *Sorrel*. *Hexand. Trigyn.* L.
1. *R. HYDROLAPATHUM*. Huds. (Great Water D.) July, August. 24
In ditches, pond sides, and wet places, occasionally, both in Wirral and Lancashire. Abundant in "water runs," on Bidston Marsh,—W.S. In ditches and ponds about Hoylake, common,—W.H., J.S. In ponds behind the Boggart-house, Carr Lane, West Derby,—W.H. Also on Formby Marsh, and near Southport.
2. *R. CRISPUS*. L. (Curled D.) June, July. 24
In pastures, road sides, and waste places, very common.
3. *R. SANGUINEUS*. L. (Bloody-veined and (b) Green-veined D.) July.
VAR. a. Hook. & Arnott. *R. SANGUINEUS*. L.
"Leaves with bright red veins."
VAR. b. *R. VIRIDIS*. Sibth. "Leaves with green veins."
Pastures, woods, and waste places, not uncommon, the VAR. a. being most so. Ince Blundell,—R. Tudor.
4. *R. CONGLOMERATUS*. Murr. (*R. acutus*. Sm.) (Sharp D.) June—August. 24
Ditch sides and moist places, common.
5. *R. OBTUSIFOLIUS*. L. (Broad-leaved D.) June—Sept. 24
Road sides and waste places, very common.
6. *R. MARITIMUS*. L. (Golden D.) July, August. 24
Frequent on the east side of Formby Marsh,—W.S. Southport,—H. Aughton. Bootle,—Mr. A. Stewart. Hoylake,—J.S. in *Herb*.

THE FLORA OF LIVERPOOL.

7. *R. ACETOSA*. L. (Common S.) June, July. 24

Meadows and pastures, common.

"The larva of the *Ino Statices* (the Green Forester) feeds on this plant."

8. *R. ACETOSELLA*. (Sheep's S.) May—August. 24

Dry pastures and waste ground, common. Very abundant about Bidston, Oxton, &c.

ORD. LXVI. THYMELACEÆ. JUSS.

The Daphne Family.

1. *DAPHNE*. Linn. *Mezereon* and *Spurge-Laurel*.

Octand. Monogyn. L.

1. *D. LAUREOLA*. L. (Common S.) January—April. ½

Banks of the Mersey near the Decoy, Hale,—J.H. An outcast from some garden.

ORD. LXVII. EUPHORBIACEÆ. JUSS.

The Spurge Family.

1. *MERCURIALIS*. Linn. *Mercury*. *Dioec. Polyand.* L.

1. *M. PERENNIS*. L. (Perennial or Dog's M.) March—May. 24

Woods and shady places, abundant, both in Wirral and Lancashire, as at Eastham, Bromboro', Croxteth and Knowsley woods.

2. *EUPHORBIA*. Linn. *Spurge*. *Monœc. Monand.* L.

1. *E. HELIOSCOPIA*. L. (Sun S.) June—October. ☉

In waste and cultivated ground, very common.

2. *E. PARALIAS*. L. (Sea S.) August—November. 24

Abundant on the Dee shore, near the village of Caldy,—W.S.; also at Heswall,—T. Sansom. Plentiful on the sand hills between Formby and Southport.

"The larva of *Deilephila Euphorbia* (the Spotted Hawk-Moth) feeds on this species, and on *E. Cyparissias*."

THE FLORA OF LIVERPOOL.

3. *E. PORTLANDICA*. L. (Portland S.) May—Sept. 24
Sand hills, from Crosby to Southport, plentiful.
4. *E. PEPLUS*. L. (Petty S.) July—November. ☉
Cultivated and waste ground, very common.
5. *E. EXIGUA*. L. (Dwarf S.) July—October. ☉
In dry barren cultivated and waste ground, common.
Acronycta Euphorbia (the Spurge) feeds on several species of this Genus.

ORD. LXVIII. CALLITRICHACEÆ. Lindl.
The Water Starwort Family.

1. CALLITRICHE. Linn. *Water Starwort.*
Monœc. Monand. L.

1. *C. VERNA*. L. (Vernal W.) April—September. ☉
VAR. a. Hook. & Arnott. *C. AQUATICA*. E.B. "Lobes
of the fruit bluntly keeled."
Abundant in ponds and ditches.
VAR. b. Hook. & Arnott. *C. PLATYCARPA*. Kutz.
"Lobes of the fruit slightly winged at the back."
In similar situations to the above, but not so common.
2. *C. PEDUNCULATA*. D.C. (Pedunculated W.) June—
September. ☉
In similar situations to the above, not uncommon.
3. *C. AUTUMNALIS*. L. (Autumnal W.) June—Oct. ☉
Ditches and ponds, common, especially in Wirral.

ORD. LXIX. CERATOPHYLLACEÆ. Gray.
The Hornwort Family.

1. CERATOPHYLLUM. Linn. *Hornwort.*
Monœc. Polyand. L.

1. *C. DEMERSUM*. L. (Common H.) July, August. 24
Abundant in a ditch on Formby Marsh, near Formby
Hall,—W.S.

THE FLORA OF LIVERPOOL.

ORD. LXX. UETICACEÆ. Juss.

The Nettle Family.

SUB-ORD. I. URTICEÆ.

1. URTICA. Linn. *Nettle.* Monœc. Tetrand. L.

1. U. URENS. L. (Small N.) June—September. 24
In waste dry and gravelly ground, frequent.

2. U. DIOICA. L. (Great N.) June—September. 24
Waste places, wall sides, &c., frequent.

"The following insects, amongst many others, are found on the Nettle:—*Argynnis Paphia* (the Silver-washed Fritillary), *Vanessa C. album* (the White Comma), *Vanessa Urticæ* (the Small Tortoise Shell), *Vanessa Io* (the Peacock), *Vanessa Atalanta* (the Admirable), *Hypercompa Dominula* (the Scarlet Tiger), *Spilosoma Menthastræ* (the Ermine), and *Leucis typica* (the Gothic)."

2. PARIETARIA. Linn. *Pellitory of the Wall.*
Polygam. Monœc. L.

1. P. OFFICINALIS. L. (Common P.) June—Sept. 24
Abundant on the walls of Bidston Church-yard.

SUB-ORD. II. CANNABINEÆ.

3. HUMULUS. Linn. *Hop.* Diœc. Pentand. L.

1. H. LUPULUS. L. (Common H.) July, August. 24
In hedges, not uncommon. About Bootle, plentiful. In a hedge by the side of a footpath beyond Gill Moss Chapel. In a hedge on the right side of the Town-Row, West Derby. In a hedge about one hundred yards from Broad Green, on the road to Childwall,—W.H. Near Southport,—H. Aughton. Also at Eastham, Oxton, Aigburth, Garston, &c. A very doubtful native.

"The following insects feed on the Hop:—*Vanessa C. Album* (the White Comma), *Hepialus Humuli* (the Ghost Moth), *Dasychira fascelina* (the Dark Tussock), and *Mamestra Persicariæ* (the Dot)."

THE FLORA OF LIVERPOOL.

ORD. LXXI. ULMACEÆ. Mirb.

The Elm Family.

1. ULMUS. Linn. *The Elm. Pentand. Digyn. L.*

1. U. SUBEROSA. Ehrh. (Common E.) March—May. ½

VAR. a. U. VULGARIS. Hook. & Arnott. (*U. campestris*. Sm.—not of Linn. *U. suberosa*. Ehrh. and E.B.) “Leaves rhomboid-obovate small (1—3 inches long), scabrous above, pubescent below.” “Samara cuneate-oblong” in *U. camp.*, and “Samara roundish-obovate” in *U. sub.*

VAR. b. U. MAJOR. Hook. & Arnott. (*U. major*. Sm.) “Leaves larger (2½—5 inches long), scabrous above, pubescent below.”

VAR. c. LEVIS. Hook. & Arnott. (*U. glabra*. Mill. E.B. *U. carpinifolia*. Lindl.) “Leaves more or less coriaceous, shining or smooth, or slightly scabrous above, nearly glabrous beneath, except in the axils of the nerves, younger ones, stipules and samaræ with scattered stalked glands, branches pendulous.”

All these varieties are met with in hedges and plantations near Liverpool and in Wirral, but, I believe, in all these cases introduced.

2. U. CAMPESTRIS. L. (*U. Montana*. Bauh. Sm. E.B.)
(Broad-leaved E. or Wych-hasel.) April,
May. ½

Hedges and woods, common.

The larvæ of the following insects, with many others, feed on the Elm:—“*Vanessa C. Album* (the White Comma), *Vanessa polychloros* (the Large Tortoise Shell), *Hammatophora (Pygæa) bucephala* (the Buff Tip), *Orthosia munda* (the Twin-spotted Drab), *O. macilenta* (the Brick), *O. stabilis* (the Quaker), *Xylina piriſtoata* (the Pale Pinion), *Miselia bimaculosa* (the Double-spot Brocade), *Zeuzera Esculi* feeds on its wood.”

THE FLORA OF LIVERPOOL.

- B. "Barren flowers in catkins; or fruit surrounded by a hardened or prickly involucre. Ovules and seeds within a closed pericarp. Style or Stigma present." (Ord. lxxii—lxxv.)

ORD. LXXII. MYRICACEÆ. Rich.

The Gale Family.

1. MYRICA. Linn. *Gale. Dioec. Tetrand. L.*

1. M. GALE. L. (Sweet G. or Dutch Myrtle.) May, June. ½

Abundant on Simmons-wood Moss,—W.H. Plentiful on Formby Marsh,—W.S. Also near Ince Blundell and Southport. Chat Moss,—R. Tudor.

ORD. LXXIII. BETULACEÆ. Rich.

The Birch Family.

1. BETULA. Linn. *Birch. Monœc. Polyand. L.*

1. B. ALBA. L. (Common B.) April, May. ½

Woods and hedges, not uncommon on either side of the Mersey.

"The Birch supports a numerous family of insects; amongst others, *Vanessa Antiopa* (the Camberwell Beauty), *Thecla Betula* (the Brown Hair Streak), *Cerura fuscicula*, *Stauropus Fagi* (the Lobster), *Leiocampa dictæa* (the Swallow Prominent), *L. dictæoides* (the Small Swallow Prominent), *Lophopteryx camelina* (the Cockscomb Prominent), *L. Carmelita*, *Ptilophora variegata*, *Endromis versicolora* (the Kentish Glory), *Lasiocampa Quercus* (the Great Egger), *Pachycampa Populi* (the December Moth) *Eriogaster lanestris* (the Small Egger), *Demas Coryli* (the Nut-Tree Tussock), *Callimorpha miniata* (the Red Arches), *Lithosia quadra* (the Large Footman), *Orthosia miniosa* (the Blossom Underwing), *O. litura* (the Brown Spot Pinion), *Apatela leporina* (the Miller), *Acronycta Alni* (the Alder), *A. auricoma* (the Scarce Dagger), *A. Euphrasie*, *Ceratopacha fluctuosa* (the Satin Carpet), and *Ceratopacha flavicornis* (the Yellow-Horned)." -- BAINES.

2. ALNUS. Tourm. *Alder. Monœc. Tetrand. L.*

1. A. GLUTINOSA. Gærtn. (*Betula Alnus. L. & Sm.*) (Common A.) March, April. ½

Wet and damp meadows, woods, and pastures, frequent.

The larvæ of the following insects, amongst others, feed on the Alder :—"*Stauropus Fagi* (the Lobster), *Notodonta dromedarius* (the Rusty Prominent), *Endromis versicolora* (the Kentish Glory), *Apatela leporina* (the Miller), *Acronycta Alni* (the Alder), and *Acronycta Psi* (the Dagger)."

THE FLORA OF LIVERPOOL.

ORD. LXXIV. SALICACEÆ. Rich.

The Willow Family.

1. SALIX. Linn. *Willow. Sallow. Osier. Dicec. Diand.* L.

1. S. PURPUREA. L. (Purple W.) March—May. ½
Moist places about Formby, plentiful,—W.S.

2. S. HELIX. L. (Rose W.) March, April. ½
Near Sutton, Eastham, Kirby, &c., not uncommon.

3. S. TRIANDREA. L. (Blunt-stipulated triandrous W.) ½
Near Halewood and Ditton, not common.

4. S. PENTANDREA. L. (Sweet Bay-leaved W.) May, June. ½
Near the Decoy, Hale, Litherland, and Ince Blundell.

5. S. FRAGILIS. L. (Crack W.) April, May. ½
Moist woods and marshy places, frequent.

6. S. ALBA. L. (Common white W.) May. ½
Moist situations, not unfrequent on either side of the Mersey.

7. S. VITELLINA. L. (Yellow W. or Golden O.)
Hedges near Hale.

8. S. FUSCA. L. (Dwarf Silky W.) April, May. ½

VAR. a. Hook. & Arnott. S. FUSCA. E.B. "Stem much branched upright, decumbent below, leaves elliptical-lanceolate, with a straight point."

VAR. b. Hook. & Arnott. S. REPENS. E.B. "Stem depressed, with short upright branches, leaves elliptic lanceolate, with a straight point."

VAR. c. Hook. & Arnott. S. PROSTRATA. E.B. "Stem prostrate, with elongated straight branches, leaves elliptic-oblong, with a curved point."

VAR. d. Hook. & Arnott. S. ARGENTEA. E.B. "Stem erect or spreading, leaves elliptical, with a re-curved point, very silvery beneath, usually long, covered with grey pubescence above."

Sand hills from the Dee to Southport, frequent, where probably the other varieties exist also.

THE FLORA OF LIVERPOOL.

9. *S. VIMINALIS*. L. (Common Osier.) March, April. ♀
Common in wet places near Liverpool, and in Wirral.
10. *S. CINEREA*. L. (*S. aquatica*. Sm.) (Gray Sallow.)
March, April. ♀
Common about ponds in Fazakerley, and on the north side of Croxteth Park,—W.H. Also in many similar situations in Wirral.
11. *S. AURITA*. L. (Round-eared S.) April, May. ♀
Moist places in Wirral and near Liverpool, very frequent.
12. *S. CAPREA*. L. (Great round-leaved S.) April, May. ♀
Woods and dry hedges, frequent.
13. *S. NIGRICANS*. Sm. (Dark-leaved S.) April—June. ♀
Near Southport,—H. Aughton.

"The different species of Willow in the various stages of their existence afford food to a very great number of insects. The root, pith, wood, both the inner and outer bark, and leaves, each support numerous species, in all the different orders, from the minute *Coccus* to the splendid *Vanessa Antiopa*." The following are a few of the Lepidoptera found upon them, some of which have been found in this locality:—" *Vanessa Antiopa* (the Camberwell Beauty), *Apatura Iris* (the Purple Emperor) *Smerinthus ocellatus* (the Eyed Hawk), *Trochilium Crabroniformis* (the Lunar Hornet), *Cossus ligniperda* (the Goat Moth), *Pygma bucephala* (the Buff Tip), *Cerura bicuspis*, *C. furcula* (the Kitten), *C. Vinula* (the Puss), *Leiocampa dictaoides* (the Small Swallow Prominent), *L. dicta* (the Swallow Prominent), *Lophopteryx Camelina* (the Coxcomb Prominent), *Pterostoma palpina* (the Pale Prominent), *Petasia Cassinia* (the Sprawler), *Ptilophora plumigera*, *Gastropacha Quercifolia* (the Lappet), *Stilpnotia Salicis* (the White Satin), *Heraclia Dominula* (the Scarlet Tiger), *Orthosia gracilis* (the Lead-coloured Drab), *O. sparsa* (the Powdered Quaker), *O. stabilis* (the Common Quaker), *O. cruda* (the Small Quaker), *O. litura* (the Brown-Spot Pinion), *O. Lota* (the Red-line Quaker), *O. Upsilon* (the Dingy Shears), *Sphexia Apiformis* (the Hornet), *Apatela Leporina* (the Miller), *Acronycta Alni* (the Alder), *A. megacephala* (the Poplar Gray), *Plasturis retusa* (the Double Kidney), *Scoliopteryx libatrix* (the Herald), *Cleoceria viminalis* (the Minor Shoulder-Knot), *Brepha Parthenias* (the Orange Underwing), *B. Notha* (the Light-Orange Underwing), *Saturnia Pavonia Minor* (Emperor Moth), and *Notodonta Dromedarius* (the Iron Prominent)."

2. POPULUS. Linn. *Poplar*. *Diæc. Octand.* L.

1. *P. ALBA*. L. (Great white P. or Abele.) March, April. ♀
Moist woods and hedges, frequent, but in most, if not in all cases, planted.
2. *P. TREMULA*. L. (Trembling P. or Aspen.) March, April. ♀
Moist woods, not uncommon but scarcely indigenous.

THE FLORA OF LIVERPOOL.

3. P. NIGRA. L. (Black P.) March, April. ½

Moist woods and hedges, but introduced.

The following insects, amongst many others, may be found on the different species of Poplar:—" *Smerinthus Populi* (the Poplar Hawk), *Cerura erminea*, *C. bifida*, *Leiocampa dictævides* (the Small Swallow Prominent), *L. dictæa* (the Swallow Prominent), *Pterostoma palpina* (the Pale Prominent), *Sphecia Apiiformis* (the Hornet), *Cossus ligniperda* (the Goat Moth)."

ORD. LXXV. CUPULIFERÆ. Rich.

The Beech Family.

1. FAGUS. Linn. Beech. Monœc. Polyand. L.

1. F. SYLVATICA. L. (Common B.) April. ½

Woods, but introduced; frequent about Liverpool and in Wirral.

2. CASTANEA. Tourn. Chestnut. Monœc. Polyand. L.

1. C. VESCA. L. (Spanish C.) May—July. ½

Woods, frequent, but not indigenous.

3. QUERCUS. Linn. Oak. Monœc. Polyand. L.

1. Q. ROBUR. L. (Common British O.) April, May. ½

VAR. a. Hook. & Arnott. Q. PEDUNCULATA. W.

"Fruits 2—6 in a long-stalked spike."

VAR. b. Hook. & Arnott. Q. ROBUR. W. Q. IN-

TERMEDIA. D. Don. "Fruits aggregated, or on a rather shortly stalked spike."

The three species (or rather varieties) of authors—*Q. Robur*.

Q. intermedia, and *Q. sessiliflora*—are common.

Woods and hedges, frequent.

"The *Apatura Iris* (the Purple Emperor), *Thecla Quercus* (the Purple Hair-Streak), *Lasiocampa Roboris* (the Oak Egger), *L. Quercus*, *Peridea trepida* (the Great Prominent)," &c.

4. CORYLUS. Linn. Hazel-Nut. Monœc. Polyand. L.

1. C. AVELLANA. L. (Common H.) February, March. ½

Woods and hedges, frequent.

On the Hazel are found the larvæ of the following insects:—" *Vanessa C. album* (the White Comma), *Stauropus Fagi* (the Lobster), *Notodonta dromedarius* (the Rusty Prominent), *Endromis versicolora* (the Kentish Glory), *Chisocampa Neutra* (the Lackey), and *Demas Coryli* (the Nut-tree Tussock)."

THE FLORA OF LIVERPOOL.

5. CARPINUS. Linn. *Hornbeam. Monœc. Polyand.* L.

1. C. BETULUS. L. (Common H.) April. ½
Woods, but not very frequent.

C. "*Barren flowers in catkins. Fruit in cones, or the seed surrounded by a fleshy involucre. Ovules and seeds not contained within a closed pericarp. Style and Stigma O.*" (Ord. LXXVI.)

ORD. LXXVI. CONIFERÆ. Juss.

The Cone-bearing Family.

SUB-ORD. I.

"Ovules inverted; foramen inferior. Pollen-grains oval, with darkly granular extremities and an intermediate transparent band; outer coat not ruptured readily by moisture." ABIETINÆ. Br. (Gen. 1.)

1. PINUS. Linn. *Fir. Monœc. Monadelph.* L.

1. P. SYLVESTRIS. L. (Scotch Fir.) April, May. ½
Woods, hedges, &c., but probably introduced.

SUB-ORD. II.

"Ovules erect; foramen superior. Pollen-grains globose; the outer coat easily ruptured by moisture, and cast off." CUPRESSINÆ. (Gen. 2.)

2. TAXUS. Linn. *Yew. Diœc. Monadelph.* L.

1. T. BACCATA. L. (Common Y.) March. ½
Near old mansions and in church yards, occasionally, but planted.

CLASS II.

MONOCOTYLEDONOUS, OR ENDOGENOUS FLOWERING PLANTS.

SUB-CLASS I. PETALOIDEÆ. (Ord. lxxvii—xci.)

“ Flowers never glumaceous, sometimes naked or nearly so, (as in ARACEÆ, PISTIACEÆ, NAIADACEÆ, and JUNCAGINACEÆ), generally with a more or less coloured perianth, the pieces of which are in a single or double whorl.”

DIV. I. *“ Ovary inferior, adnate with the tube of the perianth.”* (Ord. lxxvii—lxxxii.)

ORD. LXXVII. HYDROCHARIDACEÆ. Juss. *The Frog-bit Family.*

1. HYDROCHARIS. Linn. *Frog-bit. Monœc. Polyand.* L.

1. H. MORSUS RANÆ. L. (Common F.) July. 24

Ditches and ponds, not uncommon. Plentiful on Bidston Marsh, and near Hoylake. Also at Crosby, Formby, and Southport.

THE FLORA OF LIVERPOOL.

2. STRATIOTES. Linn. *Water-Soldier*.

Diœc. Polyand. L.

1. S. ALOIDES. L. (Water Soldier.) July. 24

Formerly in a pond between Bootle and Walton. Not uncommon in the higher parts of Wirral. In a pond near Sutton-Incline,—J. Harrison.

ORD. LXXVIII. ORCHIDACEÆ. *The Orchis Family*.

Gynandria Monand. Linn.

1. EPIPACTIS. Br. *Helleborine*.

1. E. LATIFOLIA. Sw. (Broad-leaved H.) July, August. 24

Eastham woods, frequent,—W.S. Croxteth woods, about a quarter of a mile from the Hall, abundant,—W.H.; Hale Dam wood, and similar situations. Also not rare in moist grassy spots on the sand hills at Crosby, Formby, and Southport.

2. E. PALUSTRIS. Sw. (Marsh H.) July. 24

Moist and marshy places among the sand hills at Crosby, Formby, and Southport, and at New Brighton, frequent.

2. LISTERA. Br. *Bird's Nest or Twayblade*.

1. L. OVATA. Br. (*Ophrys ovata*. L. & Sm.) (Common T.)
June. 24

Woods and moist places, not unfrequent. Moist grassy places amongst the sand hills, from Hoylake to Southport. Also inland; Parr,—J. Harrison; Sutton,—F. P. Marrat; Croxteth woods,—W. H.; Bebbington, Hale, &c.

2. L. NIDUS-AVIS. Hook. (*Neottia*. L.) (Common Bird's Nest.) May, June. 24

Hale woods? (1850),—J. Harrison. This requires confirmation.

3. NEOTTIA. Jacq. *Lady's Tresses*.

1. N. SPIRALIS. Rich. (Fragrant L.) Aug., Sept. 24

Among the sand hills at New Brighton, abundant. Sand hills between Bidston and New Brighton,—H. C. Watson, in *Hall's Flora*. Southport,—H. Aughton, and Mr. Glazebrook. Also in pastures at Hale, Allerton, &c.

THE FLORA OF LIVERPOOL.

4. ORCHIS. Linn. *Orchis*.

1. O. MORIO. L. (Green-winged Meadow O.) May,
June. 24
In meadows and pastures, frequent.
2. O. MASCULA. L. (Early purple O.) April—June. 24
In woods and pastures, frequent.
3. O. LATIFOLIA. L. (Marsh O.) June, July. 24
Moist meadows, not uncommon. New Brighton, Wallasey,
Morton, Crosby, Formby, Southport, &c. Abundant on
the borders of Simmons-wood Moss,—W.H.
4. O. MACULATA. L. (Spotted palmate O.) June, July. 24
In meadows and pastures, frequent.
5. O. PYRAMIDALIS. L. (Pyramidal O.) June—August. 24
Among the sand hills beyond New Brighton,—Wm. Pitman.
Sand hills at Hoylake, scarce,—J. Shillitoe.

5. GYMNADENIA. Br. *Gymnadenia*.

1. G. CONOPSEA. Br. (*Orchis* L. & E.B.) (Fragrant G.)
June—August. 24
Southport,—H. Aughton.

6. HABENARIA. Br. *Habenaria*. *Butterfly-Orchis*.

1. H. VIRIDIS. Br. (*Satyrion viride*. L. & E.B.) (Green H.)
June—August. 24
Formby sand hills, rare,—W.S. On Grange Hill, in a field
where a stone column is erected, rare,—W.S.
2. H. BIFOLIA. Br. (*Orchis bifolia*. L.) (Lesser B.) June—
August. 24
Meadows and moist places, not uncommon. Eastham,
Bromborough, Bebington, Sutton, &c. Also near Ince,
Formby, Southport, &c. Common on a reclaimed part of
Simmons-wood Moss,—W.H.

THE FLORA OF LIVERPOOL.

ORD. LXXIX. IRIDACEÆ. Juss.

The Iris Family.

1. IRIS. Linn. *Iris* or *Flower de Luce*.
Triand. Monogyn. L.

1. I. PSEUD-ACORUS. L. (Yellow Water I. or Corn-flag.)

May—August. 24

In watery places, frequent.

The larva of *Apamea fibrosa* (the Crescent), feeds on this plant.

ORD. LXXX. AMARYLLIDACEÆ. Br.

The Amaryllis Family.

Hexand. Monogyn. Linn.

1. NARCISSUS. Linn. *Narcissus*. *Daffodil*.

1. N. PSEUDO-NARCISSUS. L. (Common D.) March, April. 24

Near Bank Hall, Bootle,—R. Tudor. Hale wood, plentiful.
Hedges near Tranmere, rare,—T. Sansom. Hedge banks,
Fazakerley, plentiful,—W.H. Gill Moss, rare,—W.S.

The larva of *Medora olavipes* feeds on the bulbs of this plant.

2. GALANTHUS. Linn. *Snow-drop*.

1. G. NIVALIS. L. (Common S.) February, March. 24

In a large wood by the side of the road, about a quarter of
a mile west of Roby village, abundant. "If introduced
by man, it evidently must have been a very considerable
time ago,"—W.H.

ORD. LXXXI. DIOSCOREACEÆ. Br.

The Yarn Family.

1. TAMUS. Linn. *Black Bryony*. *Diosc. Hexand.* L.

1. T. COMMUNIS. L. (Common B.) May—August. 24

Hedges and shady places, very frequent about Liverpool,
and in Wirral.

THE FLORA OF LIVERPOOL.

DIV. II. "*Ovary superior, free, not adnate with the tube of the perianth.*" (Ord. lxxxii—xci.)

ORD. LXXXII. TRILLIACEÆ. De Cand.
The Trillium Family.

1. PARIS. Linn. *Herb-Paris. Octand. Tetragyn. L.*

1. P. QUADRIFOLIA. L. (Common H.) May, June. 24
Woods near Billinge,—J. Harrison.

ORD. LXXXIII. LILIACEÆ. Juss.
The Lily Family.
Hexand. Monogyn. Linn.

TRIBE 1. ASPARAGEÆ. "Roots never bulbous. Fruit fleshy." (Gen. 1, 2.)

1. ASPARAGUS. Linn. *Asparagus.*

1. A. OFFICINALIS. L. (Common A.) August. 24
Sand hills near Bootle Land Mark, scarce, and probably introduced.

2. CONVALLARIA. L. *Lily of the Valley.*

1. C. MAJALIS. L. (Sweet-scented L.) May. 24
Near Bidston Stone Quarry, where it is most probably indigenous. Old woods at Knowsley, abundant (J.S.), but probably introduced.

TRIBE 2. SCILLEÆ. "Roots bulbous. Fruit dry, capsular."
(Gen. 3, 4.)

3. AGRAPHIS. Link. *Blue Bell.*

1. A. NUTANS. Link. (*Scilla. E.B. Hyacinthus non-scriptus. L.*) (Wild Hyacinth or Blue Bell.)
March—June. 24
In woods and hedge banks, very common.

THE FLORA OF LIVERPOOL.

4. ALLIUM. Linn. *Onion. Leek. Garlic.*

1. A. URSINUM. L. (Broad-leaved G.) June. 24
Moist woods and hedge banks. West Derby, Town Row,—R. Tudor. Club Moor, in a plantation, plentiful,—W.S. Croxteth woods, near the Hall, and Childwall.
2. A. SCORODOPRASUM. L. (*A. arenarium*. L.) (Sand G.)
July. 24
Banks of the Mersey, at Speke (July, 1850),—J. Harrison.
3. A. VINEALE. L. (Crow G.) June. 24
Near Speke, banks of the river,—J. Harrison.
Fresh specimens of the two last species were brought to me in August, 1850, by J. H., but I know of no one else who has seen them growing in this locality.

5. ORNITHOGALUM. Linn. *Star of Bethlehem.*

1. O. UMBELLATUM. L. (Common S.) June, July. 24
Near Southport,—H. Aughton, and Mr. Glazebrook.
Doubtless introduced.
GAGEA LUTEA, Ker., is mentioned in Mr. Glazebrook's "Guide to Southport," as growing there, but doubtless it was an outcast from some garden, and is not now found there.

ORD. LXXXIV. JUNCACEÆ. JUSS.

The Rush Family.

Hexand. Monogyn. Linn.

1. JUNCUS. Linn. *Rush.*

1. J. EFFUSUS. L. (Soft R.) July. 24
In ditches and watery places, very common.
2. J. CONGLOMERATUS. L. (Common R.) July. 24
In ditches and watery places, very common.
3. J. GLAUCUS. Ehrh. (Hard R.) July. 1
In watery places and road sides, very frequent.
4. J. MARITIMUS. Sm. (Lesser sharp Sea R.) July, Aug. 24
Wallasey Pool, very abundant. Also near the Dee, at West Kirby, and Hoylake. Southport,—H. Aughton.

THE FLORA OF LIVERPOOL.

5. *J. ACUTIFLORUS*. Ehrh. (Sharp-flowered jointed R.)

June—August. ½

In moist pastures, woods, &c., frequent.

6. *J. LAMPOCARPUS*. Ehrh. (Shining-fruited jointed R.)

July, August. ¼

Ditches and watery places, frequent.

7. *J. OBTUSIFLORUS*. Ehrh. (Blunt-flowered jointed R.)

Wet pastures and roadsides, frequent.

8. *J. ULIGINOSUS*. Sibth. (*J. bulbosus*. Linn. *J. subverticillatus*. Wulf.)

In wet places and ditches, frequent.

The var. (*J. subverticillatus*), which has its stem spreading or procumbent, is abundant on Bidston Marsh, and near Crosby and Formby, &c.

9. *J. COMPRESSUS*. Jacq. (Round-fruited R.) June—Aug. ¼

VAR. a. Hook. & Arnott. *J. BULBOSUS*. E.B.

"Panicle usually shorter than the bractea, perianth shorter than the roundish-ovate, shortly mucronate capsule."

Wet marshy places, frequent.

VAR. b. Hook & Arnott. *J. CÆNOSUS*. Bich.

"Panicle usually longer than the bractea, perianth as long as the oval-oblong, strongly mucronate capsule."

Muddy places along the north shore, near Bootle Land Marks, Waterloo, the mouth of the Alt, Southport, &c. Abundant at Wallasey Pool, and the muddy shores of the Mersey and Dee.

10. *J. BUFONIUS*. L. (Toad R.) August. ☉

In moist situations, and where water has stood during the winter, very common.

11. *J. SQUARROSUS*. L. (Heath R.) June, July. ¼

Heathy and moory ground, frequent. Seaforth Common, Waterloo, Formby, Southport, Bidston Heath, &c.

2. *LUZULA*. De Cand. *Wood-rush*.

1. *L. SYLVATICA*. Bich. (*Juncus sylvaticus*. Huds. & E.B.)

(Great hairy W.) May, June. ¼

In woods and shady places, frequent.

THE FLORA OF LIVERPOOL.

2. *L. PILOSA*. Willd. (*Juncus pilosus*. L.) March—May. 2

In woods and shady places, frequent.

The larva of *Mythimna Trica* (the Double Line) feeds on this plant.

3. *L. CAMPESTRIS*. Br. (*Juncus camp.* L.) (Field W.)

March, April. 2

VAR. a. Hook. & Arnott. "Filaments about six times shorter than the anther, seeds nearly globose."

VAR. b. Hook. & Arnott. *L. CONGESTA*. Lej. & E.B.S.

Woods and pastures, very frequent. The latter being often found in marshy wet ground.

3. *NARTHECIUM*. Huds. *Bog Asphodel*.

1. *N. OSSIFRAGUM*. Huds. (Lancashire B.) July, Aug. 2

Oxton Heath, scarce. Formby Marsh, plentiful. Southport, &c. Simmons-wood Moss, abundant,—W.H.

ORD. LXXXV. BUTOMACEÆ. Rich.

The Flowering-Rush Family.

1. *BUTOMUS*. Linn. *Flowering-rush*.

Enneand. Hexagyn. L.

1. *B. UMBELLATUS*. L. (Common F.) June, July. 2

Ditches and ponds. Plentiful on Bidston Marsh, Leasowe, Hoylake, Little Crosby, and Formby,—R. Tudor. Southport,—H. Aughton.

ORD. LXXXVI. ALISMACEÆ. Br.

The Water Plantain Family.

1. *ALISMA*. Linn. *Water Plantain*. *Hexand. Polygn.* L.

1. *A. PLANTAGO*. L. (Greater W.) June—August. 2

VAR. a. Hook. & Arnott. "Leaves broader, more or less ovate."

VAR. b. Hook. & Arnott. *A. LANCEOLATA*. With.

"Leaves lanceolate, tapering below."

Both varieties very frequent in ditches and ponds.

THE FLORA OF LIVERPOOL.

2. A. RANUNCULOIDES. L. (Lesser W.) March—Sept. 4

In ponds and ditches, frequent, both in Wirral and on the Lancashire side of the Mersey, as at Woodside, Bidston, Wallasey, Hoylake, Bootle, Crosby, Formby, Southport, &c.

ORD. LXXXVII. JUNCAGINACEÆ. Rich.

The Arrow-Grass Family.

1. TRIGLOCHIN. Linn. *Arrow-grass. Hexand. Trigyn.* L.

1. T. PALUSTRE. L. (Marsh A.) June—August. 4

In wet marshy situations, frequent. Bidston Marsh, very plentiful. Also near the Canal bank, and Land Marks at Bootle. Near Crosby, Formby, Southport, &c.

2. T. MARITIMUM. L. (Sea-side A.) May—Sept. 4

Muddy inlets of the Mersey, Dee, and Alt, frequent, as at Wallasey and Brombore' Pools, Garston, Hale, &c. Hoylake, Formby, and Southport.

ORD. LXXXVIII. TYPHACEÆ. JUSS.

The Reed-Mace Family.

1. TYPHA. Linn. *Cat's-tail, or Reed-mace.*

Monœc. Triand. L.

1. T. LATIFOLIA. L. (Great R.) July, August. 4

In ponds and ditches, frequent.

"The larva of *Plusia Festuæ* (the Gold Spot) feeds upon it. The pupa is placed in a delicate white folliculus, situated beneath a leaf of the Typha, which is bent down angularly for that purpose by the larva."—BAINES.

2. T. ANGUSTIFOLIA. L. (Lesser R.) July. 4

In ponds and ditches, frequent.

"There are specimens in the Herbarium at the Botanic Gardens, of *Typha minor*, from 'a large marl pit, north of Little Crosby,' gathered in 1801. Sir W. Hooker, in his British Flora, doubts its existence in Britain. This plant, however, agrees in all its essential characters with his description. The barren and fertile catkins being distant from each other, and the latter elliptical, the leaves also are linear-setaceous. It is also considerably smaller (less than half the size) than *T. angustifolia*, which, about Woodside, appears more frequent than *T. latifolia*,"—T. B. Hall. I have never been able to find that any other specimen, than the one just mentioned, has ever been gathered in this locality,—J.D.

THE FLORA OF LIVERPOOL.

2. SPARGANIUM. Linn. *Bur-reed.*

Monœc. Triand. L.

1. S. RAMOSUM. Huds. (Branched B.) July, August. 24

Muddy pits, frequent.

"Curtis observes that the larvae of *Pholena Festuca* feed upon the leaves; and that the rare insect *Sphaa fissipes*, may sometimes be detected in a web under the leaves."

2. S. SIMPLEX. Huds. (Unbranched upright B.) July, August. 24

In similar situations to the last.

3. S. NATANS. L. (Floating B.) July. 24

Ponds near New Ferry. In a pond on the right side of the Chester road, a little beyond Rock Ferry. A pit on Woodhead farm, Lower Bebbington.

ORD. LXXXIX. ARACEÆ. Juss.

The Arum Family.

Monœc. Polyand. Linn.

1. ARUM. Linn. *Cuckow-pint.*

1. A. MACULATUM. L. (Cuckow-pint or Wake-Robin.)

March, April. 24

Woods and hedges, not uncommon. Plentiful in hedge banks between Deysbrook and Yew-tree House, West Derby. Speke, Hale, Croxteth, Childwall, Eastham, &c. woods. Also near Woodchurch, Upton, Southport, &c.

ORD. XC. PISTIACEÆ. Rich.

The Duckweed Family.

1. LEMNA. Linn. *Duckweed. Monœc. Diand. L.*

1. L. TRISULCA. L. (Ivy-leaved D.) June, July. ☉

Ponds and clear stagnant water, frequent.

2. L. MINOR. L. (Lesser D.) July. ☉

In ponds and ditches, very common.

THE FLORA OF LIVERPOOL.

3. *L. POLYRHIZA*. L. (Greater D.) ☉ "Flowers unknown in Britain."

Stagnant waters, not uncommon. Kirkdale,—R. Tudor. Abundant in Garston Pond.—W.S. Abundant in a pond near Club Moor,—J.S.

4. *L. GIBBA*. L. (Gibbous D.) June—September. ☉
In ponds and ditches about Liverpool, occasionally.

ORD. XCI. NAIADACEÆ. Juss.
The Pondweed Family.

1. *POTAMOGETON*. Linn. *Pondweed*.
Tetrand. Tetragyn. L.

1. *P. PECTINATUS*. L. (Fennel-leaved P.) June, July. 4
Ponds and streams, not uncommon. Abundant in the Canal, between Bootle and Litherland. Streams and ponds about Formby, frequent. Pit near the Bridge at Poulton, plentiful,—W.S.

2. *P. PUSILLUS*. L. (Small P.) July, August. 4

VAR. a. Hook. & Arnott. "Leaves three nerved, nerves in the middle, between the midrib and margin."

Ditches and ponds in Wirral, frequent. Plentiful also near Bootle, Crosby, and Formby.

VAR. b. Hook. & Arnott. *P. COMPRESSUS*. L.
"Leaves broader, with an accessory nerve on each side, between the margin and the primary lateral ones."

Ditches and ponds, not uncommon. Plentiful about Bidston, Leasowe, Hoylake, &c. Also on Crosby and Formby marshes, and near Southport.

3. *P. GRAMINEUS*. L. (Grassy P.) July. 4

Ponds and ditches. Near Rock Ferry. Plentiful on Crosby Marsh, near Hightown Station,—W.S. Not unfrequent in a large brook which runs through Croxteth Park,—W.H.

4. *P. CRISPUS*. L. (Curly P.) June, July. 4

Ditches and ponds. Not unfrequent in Wirral. Abundant on Bidston Marsh. Canal beyond Bootle, plentiful.

THE FLORA OF LIVERPOOL.

5. *P. PERFOLIATUS*. L. (Perfoliate P.) July. 24
Canal between Bootle and Litherland, very abundant.
6. *P. HETEROPHYLLUS*. Schreb. (Various-leaved P.) June,
July. 24
In a large ditch on Crosby Marsh, and in deep ditches
north of Crosby,—J.S., in *Herb.* Bidston Marsh,—H.
Shepherd, in *Hall's Flora*.
7. *P. RUFESCENS*. Schrad. (Reddish P.) July. 24
Ditches and streams on Althar Marsh, abundant. Abundant
in pits on Formby Marsh,—W.S.
“The floating leaves of the different species afford an agreeable shade to fish, and
are the habitation and food of *Hydrocampa Potamogeton* (the Brown China Mark).”—
BAINES.
8. *P. NATANS*. L. (Sharp-fruited broad-leaved P.) June,
July. 24
Ponds and ditches, very frequent.

2. *RUPPIA*. Linn. *Ruppia*. *Tetrand.* *Tetragyn.* L.

1. *R. MARITIMA*. L. (Sea Ruppia.) July, August. 24
Salt water pools and ditches. Plentiful in pools and ditches
near Wallasey Pool. Ditches by the shore a little beyond
Tranmere Hotel. Crosby,—R. Tudor.

3. *ZANNICHELLIA*. Linn. *Horned Pondweed*.

Monoc. Monand. L.

1. *Z. PALUSTRIS*. L. (Common H.) August. ☉
Ponds and ditches, frequent, both in Wirral and Lancashire.

4. *ZOSTERA*. Linn. *Grass-wrack*. *Monoc. Triand.* L.

1. *Z. MARINA*. L. (Broad-leaved G.) July, August. 24
Salt water pools and ditches, not unfrequent. Hoylake,
Formby, near the mouth of the Alt, Tranmere Pool, &c.
The minute Algae, *Conserva zostericola*, *Ulva plantaginosa*, *Berkeleys fragilis*, and
Exilaria flabellata, are found upon this plant.

THE FLORA OF LIVERPOOL.

SUB-CLASS II. GLUMACEÆ. (Ord. xcii, xciii.)

"Flowers destitute of true perianth, but enclosed within imbricated chaffy scales or bracteas."

ORD. XCII. CYPERACEÆ. *The Sedge Family.*

1. RHYNCHOSPORA. Vahl. *Beak-rush.*

Triand. Monogyn. L.

1. R. ALBA. Vahl. (*Schoenus alb. L.*) (White B.) June—August. 24

Wet pastures and moors. On all the moors in Lancashire,—B.G. On almost all the bogs in Cheshire,—B.G. Gill Moss, near Knowsley,—H. Shepherd, in *Halt's Flora*. Abundant on Simmons-wood Moss,—W.H.

2. BLYSMUS. Panz. *Blysmus. Triand. Monogyn. L.*

1. B. COMPRESSUS. Panz. (*Schoenus comp. L.*) (Broad-leaved B.) June, July. 24

Grassy spots on Crosby sand hills, and near Bootle Land Marks, abundant. Also at Formby and Southport.

2. B. RUFUS. Link. (*Schoenus ruf. E.B. Scirpus ruf. Schrad.*) (Narrow-leaved B.) July. 24

Marshy ground near Rimrose Bridge, and also near Bootle Land Marks. (Not scarce in 1850,—R. Tudor.)

3. ELEOCHARIS. Br. *Spike-rush. Triand. Monogyn. L.*

1. E. PALUSTRIS. Br. (*Scirpus pal. L.*) (Creeping S.) June, July. 24

In ditches and wet places, frequent.

2. E. ACICULARIS. Roem. et Sch. (*Scirpus acic. E.B.*) July, August. 24

Wet sandy and marshy places, not common. Crosby sand hills and Bidston Heath.

THE FLORA OF LIVERPOOL.

4. ISOLEPIS. Br. *Isolepis. Mud-rush.*

Triand. Monogyn. L.

1. I. FLUITANS. Br. (*Scirpus fluit. L. Eleocharis fluit.*

Hook. in *Br. Fl.*) (Floating I.) July, August. 24

Ditches and ponds. Not uncommon in many parts of Wirral. Plentiful in ditches at Bootle, Crosby, Litherland, Formby, &c.

2. I. SETACEA. Br. (*Scirpus setaceus. L.*) (Bristle-

stalked M.) July, August. 24

Moist sandy and gravelly places, not unfrequent. Bidston Heath, Oxtun, Claughton brick fields, Bootle, near the Rimrose Bridge, &c.

5. SCIRPUS. Linn. *Club-rush. Bull-rush.*

Triand. Monogyn. L.

1. S. LACUSTRIS. L. (Lake C. or B.) July, August. 24

Ditch and pond sides, not unfrequent. Abundant in ditches on Bidston Marsh. Walton,—R. Tudor. Crosby Marsh,—J.S., in *Herb.* Plentiful in a pond near Car Lane, West Derby,—W.H. Southport,—H. Aughton.

2. S. MARITIMUS. L. (Salt-marsh C.) July, August. 24

Salt marshes, not unfrequent. Abundant on Bidston Marsh, in ditches. Bootle shore near the Rimrose brook. Tranmere Pool, scarce.

3. S. SYLVATICUS. L. (Wood C.) July. 24

Sankey Canal bank, near Parr Hall,—J. Harrison.

4. S. CÆSPITOSUS. L. (*Eleocharis cæspit. Link.*) (Scaly-

stalked C.) June, July. 24

Moist heathy and moory places, frequent. Very abundant on Bidston and Oxtun heaths. Heswall Hill,—W.S. Bootle,—R. Tudor. Formby and Southport.

6. ERIOPHORUM. Linn. *Cotton-Grass.*

Triand. Monogyn. L.

1. E. VAGINATUM. L. (Hare-tail C.) March—May. 24

Bogs and wet moory places, not unfrequent. Crosby, Formby, Southport. Simmons-wood Moss, abundant. Bidston Marsh, &c.

THE FLORA OF LIVERPOOL.

2. *E. LATIFOLIUM*. Hoppe. (*E. polystachion*. (a) Linn?)
(Broad-leaved C.) May, June. 24
Bogs and wet heathy places. Frequent on Bidston, Crosby, and Formby Marshes. Litherland,—R. Tudor. Simmons-wood Moss, abundant,—W.H.
3. *E. ANGUSTIFOLIUM*. Roth. (Narrow-leaved C.) April. 24
Frequent on Bidston, Crosby, and Altcar Marshes. Simmons-wood Moss,—W.H. Southport, &c.
7. *CAREX*. Linn. *Carex* or *Sedge*. *Monac. Triand.* L.
1. *C. PULICARIS*. L. (Flea C.) May, June. 24
Bogs and wet moory ground. Plentiful on Bidston and other similar heaths in Wirral. Abundant on Formby Marsh,—W.S.
2. *C. OVALIS*. Gooden. (Oval-spiked C.) July 24
Bogs and marshy situations, not uncommon. Bidston, Crosby, and Formby Marshes. Bromboro', Upton, Bootle, &c.
3. *C. STELLULATA*. Gooden. (Little prickly C.) May, June. 24
Marshy and heathy places, frequent. Bidston, Wallasey, Bootle, Formby, &c. Common on Simmons-wood Moss,—W.S.
4. *C. CURTA*. Gooden. (White C.) June. 24
Rainford Moss, rare,—W.S.
5. *C. REMOTA*. L. (Distant-spiked C.) June. 24
Wet shady places, frequent. Hale, Eastham, Bromboro', Croxteth Woods, &c. Hedge bottoms in Wirral, frequent.
6. *C. PANICULATA*. L. (Great panicled C.) June. 24
Boggy and marshy places, frequent. Bidston, Crosby, and Formby Marshes. In wet marshy grounds between Oxton and Woodchurch, plentiful. Abundant in woods near Gill Moss Chapel,—W.S. In wet places in Croxteth Park,—W.H.
7. *C. TERETIUSCULA*. Gooden. (Lesser panicled C.) June. 24
Boggy meadows and pastures. Formby, Altcar, &c.
8. *C. VULPINA*. L. (Great C.) June. 24
Ditches and wet places, very frequent.
9. *C. MURICATA*. L. (Greater prickly C.) May, June. 24
Near the "Halfpenny Bridge" at Poulton, rare,—W.S.

THE FLORA OF LIVERPOOL.

10. *C. INTERMEDIA*. Gooden. (Soft brown C.) June. 24
Plentiful in ditches below Wallasey. Ditches on Crosby Marsh,—W.S.
11. *C. ARENARIA*. L. (Sea-side C.) June. 24
Abundant on the sea shore all along the coast.
12. *C. VULGARIS*. Fries. (*C. cæspitosa*. Gooden.) May, June. 24
Wet meadows and marshy pastures. Frequent in Wirral and Lancashire. Bootle, Seaforth, Crosby, Formby, Southport, &c.
13. *C. ACUTA*. L. (Slender-spiked C.) May. 24
Wet meadows and pastures, not common. Halewood and Ditton.
14. *C. CÆSPITOSA*. L. (*C. stricta*. Gooden.) (Tufted Bog C.) March—May. 24 •
On the sides of a pond in a lane leading from Great Crosby to the sand hills,—R. Tudor.
15. *C. PALLESCENS*. L. (Pale C.) June. 24
Marshy places, not unfrequent. Crosby, Formby, (and Southport,—H. Aughton). Chat Moss, &c.
16. *C. EXTENSA*. Gooden. (Long-bracteated C.)
Marshy ground near the sea. Abundant near Bromboro' Pool, and Wallasey Pool, near Poulton. Also at Bootle, the mouth of the Alt, and Southport.
17. *C. FLAVA*. L. (Yellow C.) May, June. 24
VAR. a. Hook. & Arnott. "Sterile spikelets distinctly stalked, fertile ones rather distant, beak of fruit deflexed."
VAR. b. Hook. & Arnott. *C. CÆDERI*. Ehrh.
"Spikelets all approximated, beak of fruit straight."
Boggy pastures and meadows; both varieties frequent. Among sand hills at New Brighton and Crosby. Bootle, Bromboro', Crosby, Formby Marshes, &c.
18. *C. DISTANS*. L. (Loose C.) June. 24
Abundant on Bidston Marsh, and near Tranmere Pool.
19. *C. BINERVIS*. Sm. (Green-ribbed C.) June. 24
Bidston Heath, abundant.

THE FLORA OF LIVERPOOL.

20. *C. PANICEA*. L. (Pink-leaved C.) June. 24
Moist meadows and pastures, very frequent.
21. *C. SYLVATICA*. Huds. (Pendulous Wood C.) May,
June. 24
Moist woods, frequent. Eastham, Bromboro', Croxteth,
Hale, &c.
22. *C. PENDULA*. Huds. (Great Pendulous C.) May,
June. 24
Ditch near Croxteth Hall, rather scarce,—W.S. South-
port (?)—Mr. Glazebrook, in "Guide to Southport." Not in
Mr. Aughton's list.
23. *C. PSEUDO-CYPERUS*. L. (Cyperus-like C.) June. 24
By the sides of ponds about Bidston, Bebbington, and
Bromboro'. Crosby and Formby Marshes, Southport, &c.
24. *C. GLAUCA*. Scop. (Glaucous Heath C.) June. 24
VAR. a. Hook. & Arnott. *C. RECURVA*. Huds. & Sm.
Moist meadows and pastures, frequent. Speke, Wallasey,
Bidston, &c.
25. *C. PRÆCOX*. Jacq. (Vernal C.) April, May. 24
Dry poor pastures and heaths, frequent. Abundant on
Bidston Heath, and similar situations in Wirral and
Lancashire.
26. *C. PILULIFERA*. L. (Round-headed C.)
Marshy and moory ground. Bidston Heath. Crosby
Marsh. Wirral,—H.C. Watson, in *Hall's Flora*.
27. *C. HIRTA*. L. (Hairy C.) May, June. 24
Wet meadows and pastures, frequent. Canal bank at
Litherland and Bootle, plentiful. Storeton Hill, Bromboro',
Woodside, and many other situations in Wirral.
28. *C. AMPULLACEA*. Gooden. (Slender-beaked Bottle C.)
June. 24
Allerton,—J.S., in *Herb*. Rimrose brook. Ponds and
Marshy ground near Birkenhead Park, scarce.
29. *C. PALUDOSA*. Gooden. (Lesser common C.) March. 24
On the side of a ditch, by a footpath leading from Walton
to Fazakerley and "Clock House," rare,—R. Tudor.

THE FLORA OF LIVERPOOL.

30. C. RIPARIA. Curt. (Great common C.) March. 24

Sides of ditches, ponds, &c. Frequent, both in Wirral and Lancashire.

"On the various species the larvae of the following insects, amongst others, feed :—
Simyra venosa (the Powdered Wainscot), *Leucania impura* (the Smoky Wainscot),
Erastria incana (the Silver Hook)."

ORD. XCIII. GRAMINACEÆ. Juss.

The Grass Family.

A. *Stamens* 2. *Styles* 2. (*Gen.* 1.)

Diand. Digyn. Linn.

1. ANTHOXANTHUM. Linn. *Vernal-grass.*

1. A. ODORATUM. L. (Sweet-scented V.) May, June. 24

Meadows, woods, and pastures, very frequent.

B. *Stamens* 3. *Style and Stigma* 1. (*Gen.* 2.)

Triand. Monogyn. L.

2. NARDUS. Linn. *Mat-grass.*

1. N. STRICTA. L. (Mat-grass.) June, July. 24

Moory and heathy situations, frequent. Bidston and Storeton hills, plentiful. Crosby, Formby, and Southport. Frequent on Gill Moss,—W.H.

C. *Stamens* 3 (or very rarely 1) in some or all of the
florets. Styles or Stigmas 2. (*Gen.* 3—29.)

Triand. Digyn. Linn.

3. ALOPECURUS. Linn. *Fox-tail-grass.*

1. A. PRATENSIS. L. (Meadow F.) May, June. 24

Meadows and pastures, very frequent.

2. A. AGRESTIS. L. (Slender F.) June, July. ☉

Fields and way sides. Crosby,—J.S. in *Herb.* Under a wall at the entrance of Crosby Rabbit Warren,—Mr. W. Wilson, in *Hall's Flora*. Frequent in brick fields about Woodside; and not uncommon about Grange Land Marks, Formby,—W.S. Southport,—H. Aughton.

THE FLORA OF LIVERPOOL.

3. *A. GENICULATUS*. (L. Floating F.) July, August. 24
In ponds and wet places, very frequent.

4. *PHALARIS*. Linn. *Canary-grass*.

1. *P. ARUNDINACEA*. L. (Reed C.) July, August. 24
By the side of ditches and ponds, not unfrequent. Walton, Rimrose Brook. Woodside, Upton, meadows and similar situations in Wirral.
2. *P. CANARIENSIS*. L. (Cultivated C.) July. ☉
Occasionally met with in the vicinity of Liverpool, but always, in such cases, introduced.

5. *AMMOPHILA*. Host. *Sea-reed*.

1. *A. ARUNDINACEA*. Host. (Common S., Marum, or Mat-weed.) July. 24
Very abundant on the sand hills from the Dee to Southport.

VAR. b. *A. VARIEGATA*. Hook. & Arnott. (*Arundo colorata*. Sm.) "Leaves variegated with white lines." July. 24

Frequent in ditches on Crosby Marsh. Frequent by the side of the Canal, at Bootle,—W.S. In a ditch near the Town Row, West Derby,—W.H.

6. *PHLEUM*. Linn. *Cat's-tail-grass*.

1. *P. PRATENSE*. L. (Common C. or Timothy-grass.) June. 24
Meadows and pastures, very frequent.
2. *P. ARENARIUM*. L. (Sea C.) June, July. ☉
Very abundant on the sand hills from the Dee to Southport.

7. *MILIUM*. Linn. *Millet-grass*.

1. *M. EFFUSUM*. L. (Spreading M.) June. 24
Moist shady woods, not unfrequent on either side of the Mersey. Hale, Speke, Tranmere, Eastham, &c.

8. *CALAMAGROSTIS*. Adans. *Small-reed*.

1. *C. EPIGEJOS*. Roth. (Wood S.) July. 24
In shady woods and moist places, not unfrequent, either in Wirral or Lancashire. Tranmere, clay banks near Egremont Ferry and the Magazines. Clay banks near Otterspool and Aigburth, &c.

THE FLORA OF LIVERPOOL.

9. AGROSTIS. Linn. *Bent-grass*.

1. A. CANINA. L. (Brown B.) June, July. 4

In moist barren situations, frequent.

2. A. VULGARIS. L. (Fine B.) June, July.

Banks, meadows, pastures, &c., very frequent.

3. A. ALBA. L. (Marsh B.) July, August. 4

Pastures, road sides, and moist places, very frequent.

VAR. b. Hook. & Arnott. A. STOLONIFERA. L. & E.B.

Common on the sea shore at New Brighton,—W.S.
"North and south shores of Liverpool, and near Garston
(the plant figured by Sowerby, in Eng. Bot., t. 1532, from
the same locality),"—J.S. in *Herb*.

4. A. SPICA VENTI. L. (Spreading Silky B.) June, July. ☉

In a fence beyond the gate near Bootle Church,—Mr.
Price. Plentiful on new roads near Birkenhead Docks.

10. CATABROSA. Beauv. *Whorl-grass*.

1. C. AQUATICA. Beauv. (*Aira*. L.) (Water W.) May,
June. 4

In ditches and moist places near Bootle Land Marks,
abundant. Crosby, Formby, &c.

11. AIRA. Linn. *Hair-grass*.

1. A. CÆSPITOSA. L. (Tufted A.) June, July. 4

Woods and shady moist places, frequent.

2. A. FLEXUOSA. L. (Waved H.) July. 4

In heathy and hilly situations, frequent. Plentiful in
Eastham woods, on Bidston Heath, and near the Quarry,
also near West Kirby, and other similar situations in
Wirral. Dingle, Hale, &c.

3. A. CARYOPHYLLEA. L. (Silvery H.) June, July. 4

In dry gravelly and heathy situations, frequent.

4. A. PRÆCOX. L. (Early H.) May, June. ☉

Old hedge banks, and dry sandy hills and pastures,
frequent.

12. MOLINIA. Mœnch. *Molinia*.

1. M. CÆRULEA. Mœnch. (*Melica*. L. & E.B.) (Purple M.)
July, August. 4

Wet heathy and moory places, frequent. Bidston,
Oxton, &c.

THE FLORA OF LIVERPOOL.

13. MELICA. Linn. *Melic-grass.*

1. M. UNIFLORA. L. (Wood M.) May—July. 24
Shady woods and hedge sides, not uncommon, Tranmere wood, Gilbrook, Bidston, Eastham, and other similar places in Wirral. Ince, Croxteth woods, &c., in Lancashire.

14. HOLCUS. Linn. *Soft-grass.*

1. H. MOLLIS. L. (Creeping S.) July. 24
Hedges and pastures, frequent.
2. H. LANATUS. L. (Meadow S.) June, July. 24
Meadows, woods, and pastures, frequent.

15. ARRHENATHERUM. Beauv. *Oat-like-grass.*

1. A. AVENACEUM. (*Holcus avenaceus*. Scop. & E.B. *Avena elatior*. L.) Beauv. (Common O.)
In hedges and pastures, frequent.

16. POA. Linn. *Meadow-grass.*

1. P. AQUATICA. L. (*Glyceria aquat.* Sm.) (Reed M.) July, August. 24
Ponds and ditches, Southport,—H. Aughton.
2. P. FLUITANS. Scop. (*Festuca*. L. *Glyceria*. Br.)
(Floating M.) July, August. 24
In ponds and ditches, frequent.
3. P. MARITIMA. Huds. (Creeping Sea M.)
Sea shore near Bootle Land Marks, abundant. And near Wallasey Pool.
4. P. DISTANS. L. (Reflexed M.) July, August. 24
Sandy situations. Bootle, near the canal, frequent. Abundant on Bidston Marsh, near Tranmere slip, Wallasey, &c. Plentiful in waste ground near the Prince's Park,—W.H.
5. P. PROCUMBENS. Curt. (Procumbent Sea M.) June, July. ☉
Plentiful in brick fields north of Liverpool, and near the canal at Sandhills and Miller's bridges.

THE FLORA OF LIVERPOOL.

6. *P. RIGIDA*. L. (Hard M.) June. ☉
Dry sandy situations, not common. New Brighton,—
Miss E. Potts and A. Murray, in *Hall's Flora*. Magazines,
Formby, and Southport.
 7. *P. PRATENSIS*. L. (Smooth-stalked M.) June, July. 24
Meadows and pastures, frequent.
 8. *P. TRIVIALIS*. L. (Roughish M.) June, July. 24
Meadows and pastures, frequent.
 9. *P. ANNUA*. L. (Annual M.) April—September. ☉
Meadows, pastures, road sides, waste places, &c., very
abundant. By far the most common of our native grasses.
17. *TRIODIA*. Brown. *Heath-grass*.
1. *T. DECUMBENS*. Beauv. (*Poa. dec.* E.B. *Festuca. dec.* L.
Danthonia. dec. D.C.) (Decumbent H.) July. 24
In dry heathy and moory situations, frequent. Bidston
and Oxton heaths, Seaforth Common, Eastham and
Brombore' woods. Plentiful on Formby Marsh and on
Simmons-wood Moss,—W.H. Plentiful about New Bright-
ton Stone Quarry,—W.S.
18. *BRIZA*. Linn. *Quaking-grass*.
1. *B. MEDIA*. L. (Common Q.) June. 24
Meadows and moist pastures, frequent both in Wirral and
Lancashire.
19. *DACTYLIS*. Linn. *Cock's-foot-grass*.
1. *D. GLOMERATA*. L. (Rough C.) June, July. 24
Hedges, meadows, pastures, and way sides, frequent.
20. *CYNOSURUS*. Linn. *Dog's-tail-grass*.
1. *C. CRISTATUS*. L. (Crusted D.) July. 24
Pastures and cultivated fields, frequent.
21. *FESTUCA*. Linn. *Fescue-grass*.
1. *F. UNIGLUMIS*. Soland. (Single-glumed F.) June,
July. ☉
Sand hills along the shore, at Bootle, Crosby, Formby, and
Southport, but especially abundant at New Brighton.

THE FLORA OF LIVERPOOL.

2. *F. BROMOIDES*. L. (Barren F.) June. ☉

VAR. a. Hook. & Arnott. "Flowering panicle, erect-patent, culm above leafless."

Way sides and dry pastures, frequent in Wirral. Abundant on the sand hills at New Brighton, Crosby, &c.

VAR. b. Hook. & Arnott. *F. MYURUS*. Smith (not Linn). "Panicle drooping at the end; culm sheathed and leafy to near the panicle."

On old walls near Bidston.

3. *F. OVINA*. L. (Sheep's F.) June, July. 4

VAR. a. Hook. & Arnott. *F. VIVIPARA*. Sm. *F. CÆSIA*. Sm. *F. TENUIFOLIA*. Sibth. "Culms short somewhat four angled and scabrous pubescent below the small panicle, leaves involute setaceous root fibrous tufted."

Sand hills along the shore, frequent.

VAR. b. Hook. & Arnott. *F. DURIUSCULA*. L. & Sm. "Culms taller many angled and somewhat glabrous below the broader panicle, leaves of the culm often flat but afterwards usually involute, root tufted or slightly creeping."

Pastures and sand hills along the coast, frequent.

VAR. c. Hook. & Arnott. *F. RUBRA*. L. & Sm. "Culms usually tall many angled and glabrous below the often broadish panicle, leaves of the culm flat at length sometimes involute, root creeping, the scions ending in erect shoots with distichous leaves."

On the sand hills along the coast, and near Wallasey Pool, frequent.

4. *F. PRATENSIS*. Huds. (Meadow F.) June, July. 4

VAR. a. Hook. & Arnott. "Some or all of the branches of the panicle in pairs, one usually with several spikelets."

In meadows, moist pastures, &c., frequent.

THE FLORA OF LIVERPOOL.

VAR. b. Hook. & Arnott. F. LOLIACEA. Sm.

"Branches of the panicle solitary, reduced to a single spikelet, which is sessile or shortly stalked below."

In similar situations to the preceding but more rare.

5. F. ELATIOB. L. (Tall F.) June, July. 24

On the clay banks on the shores of the Mersey, at Egremont, Rock Ferry, Otterspool, Garston, &c., abundant.

6. F. GIGANTEA. Vill. (Tall-bearded F.) July, August. 24

VAR. a. Hook. & Arnott. "Panicle larger and more drooping, spikelets about five-flowered."

VAR. b. Hook. & Arnott. F. TRIFLORA. Sm.

"Panicle smaller and more erect; spikelets fewer, about three-flowered; leaves narrower."

Woods and moist hedges about Bidston, Tranmere, &c., frequent.

22. BROMUS. Linn. *Brome-grass*.

1. B. ASPER. L. (Hairy Wood B.) June, July. ☉ or ♂

Moist hedges and woods, frequent.

2. B. STERILIS. L. (Barren B.) June. ☉

On dry hedge banks, fields, and waste grounds, frequent.

3. B. SECALINUS. L. (Smooth Rye B.) June, July. ☉ or ♂

In corn fields, occasionally but not frequent.

4. B. MOLLIS. L. (Soft B.) June. ☉ or ♂

Meadows, pastures, road sides, and waste ground, very frequent.

5. B. RACEMOSUS. L. (Smooth B.) June. ☉ or ♂

"In a field on the right-hand side of the road from Tranmere to Rock Ferry, nearer the former,"—H. C. Watson, *in Hall's Flora*.

6. B. ARVENSIS. L. (Taper Field B.) July, August. ☉

Waste places and newly-made road sides near Birkenhead Docks, abundant (1849).

THE FLORA OF LIVERPOOL.

23. AVENA. Linn. *Oat, or Oat-grass.*

1. *A. FATUA*. L. (Wild O.) June—August. ☉
Corn fields, not frequent. Hale, Formby, &c.
2. *A. STRIGOSA*. Schreb. (Bristle-pointed O.) June, July. ☉
Corn fields, not unfrequent, both in Wirral and Lancashire.
3. *A. PUBESCENS*. L. (Downy O.) June, July. 4
Toxteth Park, near Knot's Hole,—J.S. in *Herb.* Near
Bootle and Seacombe. Abundant on Hilbre Island.

24. PHRAGMITES. Trin. *Reed.*

1. *P. COMMUNIS*. Trin. (*Arundo Phragmites*. L. & Sm.)
(Common R.) July, August. 4
In ditches, pond sides, brooks, &c., very frequent.

25. HORDEUM. Linn. *Barley.*

1. *H. PRATENSE*. Huds. (Meadow B.) July. ☉
Bidston Marsh, very abundant, and in moist pastures near
Seacombe and Tranmere Pool.
2. *H. MURINUM*. L. (Wall B.) June, July. ☉
Waste ground, road sides, walls, &c. Abundant near
Seacombe Chemical Works, and many other parts of
Wirral. Walton Church-yard, abundant,—W.S.
3. *H. MARITIMUM*. With. (Sea-side B.) June. ☉
Bidston Marsh, and near Wallasey Pool, abundant.

26. ELYMUS. Linn. *Lyne-grass.*

1. *E. ARENARIUS*. L. (Upright Sea L.) July. 4
Southport,—H. Aughton, and Mr. Glazebrook in "Guide
to Southport."

27. TRITICUM. Linn. *Wheat, or Wheat-grass.*

1. *T. JUNCEUM*. L. (Rushy Sea W.) July, August. 4
Sand hills from the Dee to Southport, frequent.
2. *T. REPENS*. L. (Creeping W. or Couch-grass.) June—
August. ☉
Fields and waste places, too frequent.

THE FLORA OF LIVERPOOL.

3. *T. CANINUM*. Huds. (Fibrous-rooted W.) July. 2
Southport,—Mr. Glazebrook, in "Guide to Southport."

28. BRACHYPODIUM. Beauv. *False Brome-grass*.

1. *B. SYLVATICUM*. Beauv. (Slender F.) June, July. 2
Woods and hedges, frequent.

29. LOLIUM. Linn. *Darnel. Rye-grass*.

1. *L. PERENNE*. L. (Perennial or Beardless R.) June,
July. ♂ or 2
Pastures, waste places, and road sides, frequent.

2. *L. TEMULENTUM*. L. (Darnel.) July. ☉

VAR. a. Hook. & Arnott. "Florets with rigid awns about as long as or longer than the glumella."

In corn fields, occasionally but not frequent.

VAR. b. Hook. & Arnott. *L. ARVENSE*. With. & Sm.
"Florets with soft imperfect awns or awnless."
Corn fields at Melling, very abundant in 1849,—T. Sansom.

30. LEPTURUS. Brown. *Hard-grass*.

1. *L. INCURVATUS*. Trin. (*Rottbællia incurv.* L. & Sm.) (Sea H.)
July. ☉

Wallasey Pool, near Seacombe Chemical Works, very abundant. Bootle shore near the Land Marks. Plentiful on the river shore between Tranmere and Rook Ferry, and between Otterspool and Garston,—W.S.

POLYPOGON LITTORALIS. Sm. (Perennial Beard-grass,) is stated by Mr. Glazebrook, in the "Guide to Southport," and by Mr. H. Aughton, in Robinson's "History of Southport," to grow in that neighbourhood; but doubtless there is some mistake, as it has never, that I am aware of, been found by any one else on the north-western coast of England.

The following insects, amongst very many others, may in their various states be found on the grasses:—"*Hipparchia Egeria* (the Speckled Wood B.) on *Triticum repens*; *H. Galathea* (the Marbled White B.) on *Phleum pratense*; *H. Tythonus* (the Large Heath B.) larva on *Poa annua*; *H. Janira* (the Meadow Brown B.) on *Poa pratensis*; *H. Hyperanthus* (the Ringlet B.) on *Milium effusum*; *H. Pamphilus* (Small Heath B.) on *Cynosurus cristatus*; *Lycana dispar* (the Large Copper B.) on Reeds; *Polyommatus Alexia* (the Common Blue B.) on various grasses; *Anthrocera Filipendula* (the six-spot Burnet) on *Briza media*; *Gastropacha Quercifolia* (the Lappet Moth) on several grasses."

CLASS III.

ACOTYLEDONOUS, OR CELLULAR PLANTS.

SUB-CLASS I. ACROGENÆ, OR CORMOGENÆ. FILICES.

The Ferns and Fern Allies. (Ord. xciv—xcix.)

ORD. XCIV. POLYPODIACEÆ. R. Br. *The Polypody Family.*

A. POLYPODIEÆ.

“Capsules dorsal or marginal, surrounded by a ring, reticulated and pellucid, opening transversely and irregularly. Fronds circinnate in æstivation.” (*Gen.* 1—7.)

1. CETERACH. Willd. *Ceterach.*

1. C. OFFICINARUM. Willd. (Common C.) Summer. 24

Two specimens found in the Dingle by Mr Mc Owen, and one by James Galloway on an old wall near Club Moor, growing amongst *Asplenium Ruta-muraria*,—W.H.; planted in both places.

2. POLYPODIUM. Linn. *Polypody.*

1. P. VULGARE. (Common P.) May—October. 24

On old hedge banks, wall tops, &c., very common.

THE FLORA OF LIVERPOOL.

VAR. b. *P. SERRATUM*. Willd. (*P. Cambricum*. L.)

Lobes serrated, and even pinnatifid or laciniated.

VAR. c. *P. ACUTUM*. Lobes and frond long, narrow,
acute.

Occasionally found along with *P. VULGARE*. Holt Hill,
Orton, Bidston, &c. Abundant on hedge banks near the
"New Hut," Hale,—W.H.

3. *ASPIDIUM*. Sw. *Shield Fern*.

1. *A. LOBATUM*. Sw. (Close-leaved Prickly S.) July, Aug. 24

Common on both sides of the Mersey. In a hedge by the
side of the footpath leading across the fields from Walton
Church to Fazakerley, not uncommon. Near Knowsley.
Frequent near Bromboro' Pool (W.S.), and by ditches,
"New Hut," Hale,—W.H. Near the Dog Clog, Tarbock,
—W.H.

2. *A. ACULEATUM*. Sw. (Soft prickly S.) July, August. 24

Abundant about Prenton, Cheshire,—W.S. Also near
Orton, Thurstaston, and Heswall. Plentiful in a lane be-
hind Summer Hill, Broad Green, and in great profusion on
hedge banks, and by the side of a small brook near the
"New Hut," Hale,—W.H. Near Walton. Knowsley.

3. *A. ANGULARE*. Willd. (Angular-leaved S.) July, Aug. 24

In hedges about Fazakerley. At Sefton. Wood at Brom-
boro',—T. Sansom.

4. *A. OREOPTERIS*. Sw. (Heath S.) July, August. 24

Abundant by the sides of sandy lanes near Simmons-wood
Moss,—W.S., J.S. Frequent by the sides of sandy lanes
near Bidston Hill and Orton,—W.S. Plentiful in a large
boggy wood about half a mile on this side of Gateacre,—
W.H. Shady lanes about Netherton,—R. Tudor. Kirby,
—W.H. Crosby,—W.S. Hedges at Rainhill, frequent;
also between Latham and Skelmersdale,—T. Sansom.

5. *A. FILIX MAS.* Sw. (Blunt S.) July, August. 24

Very common in hedges, woods, and shady places.

6. *A. DILATATUM*. Sw. (Sharp-toothed S.) July, Aug. 24

Very common in the same situations as the last.

7. *A. SPINULOSUM*. Willd. (Prickly-toothed S.) July, Aug. 24

Common in Lancashire. Hedges about Moseley Hill and
Rainhill,—T. Sansom.

THE FLORA OF LIVERPOOL.

4. ASPLENIUM. Linn. *Spleenwort.*

1. A. RUTA-MURARIA. L. (Wall-rue S.) July—October. 24
Abundant on old walls. Toxteth Park, Cow Lane, Wavertree, Olive Mount, Club Moor, Croxteth Hall, Cabbage Hall, Walton, Sefton, &c. Also at Upper Tranmere, and on Bebbington Church and porch.
2. A. TRICHOMANES. L. (Common Wall S.) Summer. 24
Sparingly on a stone wall, by the road side, between Woolton and Gateacre,—J.S. On a wall between Broad Green and Knotty Ash. On a wall near Bragg's-houses, Wavertree,—W.H.
3. A. MARINUM. L. (Sea S.) June—October. 24
In clefts of the rocks by the sea shore, near the Dingle, formerly abundant, now very scarce. Abundant on the rocks at Hilbre Island, very luxuriant and occasionally proliferous and curiously lobed in an irregular manner. Sparingly about Bromboro' Pool and West Kirby,—J.S. and W.S. Runcorn.
4. A. ADIANTUM NIGRUM. L. (Black-stalked S.) June—October. 24
Hedge bank at Ford, sparingly. Old wall near Sefton Church,—T. Sansom. Plentiful on an old wall about one hundred yards beyond Bidston Church,—J.S. In shady lanes between Rock Ferry and Oxtan. Abundant near Eastham. Kirby,—R. Tudor. Near Bragg's-houses, Wavertree. "New Hut," Hale, abundant,—W.H.
5. A. FILIX-FEMINA. Bernh. (Short-fruited S.) June—August. 24
In shady moist hedge banks, not uncommon.

5. SCOLOPENDRIUM. Sw. *Hart's Tongue.*

1. S. VULGARE. Sym. (Common H.) July—Sept. 24
Common on moist hedge banks on the Lancashire side of the Mersey, and not uncommon in similar situations on the Cheshire side. W.H. has gathered, in an old quarry at Fir Grove, West Derby, specimens two feet long and nearly four inches broad.
- VAR. S. UNDULATUM. Frond narrow, beautifully waved.
Not unfrequent about the "New Hut," Hale,—W.H.
- VAR. S. RAMOSUM. Fronds several from the same rachis.
Hedge bank by the side of a lane, Oxtan,—W.S.

THE FLORA OF LIVERPOOL.

VAR. *S. FURCATUM*. Fronds cleft into two or more parts at the top.

Plentiful about Hale, Hale wood, and a shady ditch near Oak Vale Nursery,—W.S., J.S., and W.H. Near Club Moor. In shady lanes between Woodside and Oxtan, not unfrequent. About Wavertree,—T. Sansom.

6. *PTERIS*. Linn. *Brake*.

1. *P. AQUILINA*. L. (Common B.) July, August. 24
Woods, heaths, and gravelly places, very common.

7. *BLECHNUM*. Linn. *Hard-Fern*.

1. *B. BOREALE*. Sw. (Northern H.) July, August. 24
Woods and moist heaths, common.
A proliferous variety is to be occasionally found on Tranmere Heath, and in a fir wood at Cloughton.

ORD. XCV. *OSMUNDACEÆ*. R. Br.
The Osmund Family.

“Capsules clustered on the margin of a transformed frond, with an obscure ring, reticulated and pellucid, opening by two regular valves. Fronds circinnate in æstivation.”
(*Gen. 1.*)

1. *OSMUNDA*. Linn. *Osmund Royal or Flowering Fern*.
1. *O. REGALIS*. L. (Common O. or Flowering Fern.) July, August. 24
Frequent on hedge banks, and in the lands between Crosby and Formby, at Fazakerley, and about Orrell and Litherland. At Clegg's pits, Allerton. On Simmons-wood Moss, and vicinity, it is very abundant and of large size, reaching a height of from four to five feet,—W.H. Sutton Moss. Southport. In a small thicket a little beyond Bebbington Church. Ullett Lane (one root in 1846 and 1848),—T. Sansom.

THE FLORA OF LIVERPOOL.

ORD. XCVI. OPHIOGLOSSACEÆ. R. Br.

The Adder's-Tongue Family.

"Capsules arranged on the margin of a contracted frond;
sessile, without reticulations or a ring, coriaceous opaque.

Fronds straight in æstivation." (*Gen.* 1, 2.)

1. OPHIOGLOSSUM. Linn. *Adder's Tongue.*

1. O. VULGATUM. L. (Common A.) May, June. 24

Abundant in young woods south and south-west of Croxteth Park,—W.H. and J.S. Sutton Moss,—J.H. The field on the right hand side of the new Chester road, a short distance beyond Tranmere,—H. C. Watson, in *Halt's Flora*. In a moist field in which the path leading from Bidston Church terminates, rather luxuriant. Meadows near Crosby. A meadow a little beyond New Brighton. Formerly on Seaforth Common (with *B. lunaria*) but now nearly eradicated. Bidston Marsh,—R. Tudor.

2. BOTRYCHIUM. Sw. *Moonwort.*

1. B. LUNARIA. Sw. (Common M.) May, June. 24

Seaforth common. New Brighton and Waterloo sand hills. Bootle. Southport. Hadduck near Newton Race Course, scarce.

ORD. XCVII. LYCOPODIACEÆ. Sw.

The Club-Moss Family.

"Fructification sessile, in the axils of leaves or bracteas.

Capsules without a ring, 2—3 valved. Æstivation
straight."

1. LYCOPodium. Linn. *Club-Moss.*

1. L. CLAVATUM. L. (Common C.) July, August. 24

On the south side of Simmons-wood Moss, rare,—W.S.

2. L. INUNDATUM. L. (Marsh C.) June, July. 24

Abundant in swampy places on Heswall Hill; and on a marsh near Thurstaston,—W.S. In a marsh at the commencement of Bidston Heath.

THE FLORA OF LIVERPOOL.

3. *L. SELAGINOIDES*. L. (Lesser Alpine C.) August. 24

Abundant in moist places amongst the sand hills near the old Warren House, Crosby,—W.S. Meadow below Crosby. Moist places near Litherland. Southport. Seaforth Common, near Rimrose Brook. Moist places between New Brighton and Wallasey. Heswall Hills.

4. *L. SELAGO*. L. (Fir C.) July, August. 24

Plentiful on the south side of Simmons-wood Moss,—W.S. By the side of the Stone Quarry, Bidston Hill,—R. Tudor.

ORD. XCVIII. MARSILEACEÆ. R. Br.

The Pepperwort Family.

“*Capsules* without a ring, within *involucres* that are situated near the root of the plant. Aquatics.” (*Gen.* 1, 2.)

1. *PILULARIA*. Linn. *Pill-wort*.

1. *P. GLOBULIFERA*. L. (Creeping P.) June, July. 24

Abundant on Formby Marsh, not far from Formby Hall,—W.S. Childwall Common,—Dr. Bostock, *in With*. By the side of a pond at Allerton, about one hundred yards from the Dog Kennels,—H. Shepherd, *in Hall's Flora*.

ORD. XCIX. Equisetaceæ. De Cand.

The Horsetail Family.

“*Fructification* terminal in *spikes* or *catkins*, consisting of peltate polygonous scales, on the underside of which are from four to seven *involucres*, which open longitudinally, and contain numerous globose bodies enfolded by four filaments clavate at their extremities.” (*Gen.* 1.)

1. *EQUISETUM*. Linn. *Horse-tail*.

1. *E. FLUVIATILE*. L. (in part) Sm. (Great Water H.)

April, May. 24

Ditches by the side of the foot road between Seacombe and Poulton. Clay banks, Rock Ferry,—W.S. Moist places near Gillbrook.

THE FLORA OF LIVERPOOL.

2. *E. ARVENSE*. L. (Corn H.) March, April. 24
Corn fields and road sides, frequent.
3. *E. SYLVATICUM*. L. (Branched Wood H.) April, May. 24
In a large wood half a mile beyond Gill Moss Chapel,
from Kirby, abundant. And on the north side of Billinge
Hill, plentiful,—W.S. Crosby,—R. Tudor. Seacombe,
—H. C. Watson, in *Hall's Flora*.
4. *E. LIMOSUM*. L. (Smooth, naked H.) June, July. 24
Marshy, watery places and ditches, abundant.
5. *E. PALUSTRE*. L. (Marsh H.) June, July. 24
Common in marshy, wet places. Crosby, Formby, South-
port, Wirral, &c.
- VAR. C. *POLYSTACHION*. Hook. Branches terminating
in catkins.
Crosby Marsh,—J.S., in *Herb*. And at Formby,—T.
Sansom.
- VAR. *E. NUDUM*. *Newman*.
Common on both sides of the Mersey, but more especially
about Crosby,—T. Sansom.
6. *E. HYEMALE*. L. (Rough H.) July, August. 24
Frequent on the river Dee shore near Gayton. Parkgate
and Thurstaston.
7. *E. VARIEGATUM*. Schleich. (Variegated rough H.) June,
July. 24
Plentiful on the sand hills at New Brighton, Leasowe,
Waterloo, and Crosby.

THE FLORA OF LIVERPOOL.

ORD. C. MUSCI. *The Moss Family.*

SECT. I. ACROCARPI. "Seta (or fruitstalk) terminal.
(*Dicranum* alone offers a few exceptions.)" Hook.

SUB-SECT. I. ASTOMI. "Lid adhering to the mouth of the
capsule which is destitute of peristome." (*Gen.* 1.)

1. PHASCUM. Linn. *Earth Moss.*

1. P. ALTERNIFOLIUM. Dicks. (Alternate-leaved E.) January,
February.

"Near Liverpool,—Rev. Mr. Taylor." Hook. in *Br. Flora.*

2. P. CRISPUM. Hedw. (Curly-leaved E.) Spring.

Near the old abbey at Windle,—W.S.

3. P. SUBULATUM. Linn. (Awl-leaved E.) Spring.

Abundant on Clay banks below Egremont,—W.S. Abun-
dant on the railway banks at Roby,—W.H.

4. P. MUTICUM. Schreb. (Common Dwarf E.) Spring.

Cornfields about Maghull and Kirby, frequent,—W.S.

5. P. CUSPIDATUM. Schreb. (Cuspidate E.) Spring.

Not unfrequent on moist hedge banks.

SUB-SECT. II. GYMNSTOMI. "Lid deciduous. Mouth of
the capsule naked." Hook. (*Gen.* 2—3.)

2. SPHAGNUM. *Bog-Moss.*

1. S. OBTUSIFOLIUM. Ehrh. (Blunt-leaved B.) Summer.

VAR. a. VULGARIS. Hook. "Stem loosely tufted, seven
or eight inches long, leaves closely imbricated."

Extremely abundant in bogs and moist heaths.

VAR. b. MINUS. Hook. "Stems densely tufted,
two or three inches long, leaves closely im-
bricated."

Abundant on Rainford Moss,—W.S. Abundant on the
west side of Simmons-wood Moss,—W.H.

THE FLORA OF LIVERPOOL.

VAR. c. FLUITANS. Hook. "Stems much lengthened out, two or three feet long, slender, leaves scattered remote."

Swampy places on Bidston Hill,—W.S.

2. S. SQUARROSUM. Web. & Mohr. (Spreading-leaved B.) Summer.

Boggy places. Not unfrequent either in Wirral or Lancashire. Abundant on Simmons-wood and Rainford Mosses,—W.H. and W.S.

3. S. ACUTIFOLIUM. Ehrh. (Slender B.) Summer.

Boggy places, frequent. Simmons-wood Moss, plentiful,—W.H.

4. S. CUSPIDATUM. Ehrh. (Long-leaved floating B.) Summer.

In ditches on Simmons-wood and Rainford Mosses, very abundant. "Except in dry seasons, is wholly immersed in water,"—W.H. & W. S. Crosby,—R. Tudor.

3. GYMNOSTOMUM. Hedw. *Beardless Moss.*

1. G. OVATUM. Hedw. (Hairy-leaved B.) Spring.

Railway bank between Broad Green and Roby, plentiful,—W.H. Wet places on Bidston Hill,—W.S.

2. G. TRUNCATULUM. Hoffm. (Little blunt-fruited B.)

VAR. a. Hook. G. TRUNCATULUM. Hoffm., Turner, and E.B. "Capsule turbinate."

Common on banks and in moist places.

VAR. b. Hook. G. INTERMEDIUM. Turn. & E.B.

"Capsule ovate or oblong."

Common in Cheshire,—W.S.

3. G. FASCICULARE. Hedw. (Blunt pear-shaped B.) Spring.

Not unfrequent on moist banks. On the tops of pots in green-houses,—W.S.

4. G. PYRIFORME. Hedw. (Sharp pear-shaped B.) Spring.

Sandy lanes near Crosby. Brick fields north of Liverpool,—W.S. Fazakerley. Wallasey,—T. Sansom.

THE FLORA OF LIVERPOOL.

SUB-SECT. III. PERISTOMI. "Lid deciduous ; mouth of the capsule furnished with a peristome."

DIV. I. APLOPERISTOMI. "Peristome single." (*Gen.* 4—13.)

4. TETRAPHIS. Hedw. *Tetraphis*.

1. T. PELLUCIDA. Hedw. (Pellucid T.) Spring.

Flaybrick Hill,—T. Sansom.

5. SPLACHNUM. Linn. fil. *Splachnum*.

1. S. MINOIDES. Linn. fil. (Brown tapering S.) Summer.

On Rainford Moss, rare,—W.S.

6. ENCALYPTA. Hedw. *Extinguisher-Moss*.

1. E. STREPTOCARPA. Hedw. (Spiral-fruited E.)

Not unfrequent on the sand hills at New Brighton, in a barren state,—W.S.

7. WEISSIA. Hedw. *Weissia*.

1. W. CIRREATA. Hedw. (*Grimmia Dicksoni*. E.B.) (Curleaved W.) Spring.

On rocks on Bidston Hill, frequent. On walls about West Derby, frequent,—W.S.

2. W. CURVIROSTRA. Hook. & Tayl. (*Grimmia recurvirostra*. E.B.) (Curve-beaked W.) Winter.

On the sand hills at Crosby and New Brighton, frequent. On walls about West Derby, frequent,—W.S. On walls about Gateacre, not unfrequent,—W.H.

3. W. CRISPULA. Hedw. (*Grimmia crispula*. Turn. & E.B.) (Curled W.) Spring.

On an old stone bank on the road to Gateacre, a little beyond Childwall church, not unfrequent,—W.H. Sefton. Near New Ferry. Tranmere. Between Allerton and Garston,—T. Sansom.

4. W. CONTROVERSA. Hedw. (*Grimmia controversa*. Turn. and E.B.) (Green-cushioned W.) Spring.

On shady banks, very frequent.

THE FLORA OF LIVERPOOL.

8. GRIMMIA. Ehrh. *Grimmia*.

1. G. APOCARPA. Hedw. (Sessile G.) Spring.
On a wall near Arrow, rare,—W.S.
2. G. PULVINATA. Sm. (*Bryum pulvinatum*. L.) (Grey-cushioned G.) Spring.
On the tops of old stone walls and outhouses, frequent.

9. DIDYMODON. Hedw. *Didymodon*.

1. D. PURPUREUS. Hook. & Tay. (*Dicranum purpureum*. Hedw., Turn., and E.B.) (Purple Didymodon.) Spring.
On moist banks and rocks, very frequent.
2. D. FLEXICAULIS. (Wavy-stemmed D.) Spring.
Sand hills at Crosby and New Brighton,—W.S.
3. D. CAPILLACEUS. Schrad. (*Trichostomum cap.* E.B.) (Fine-leaved D.) Spring.
On Rainford Moss,—W.S.

10. TRICHOSTOMUM. Hedw. *Fringe-Moss*.

1. T. LANUGINOSUM. Hedw. (Wooly F.) Jan.—Dec.
In some swampy ground near Thurstaston,—W.S.
 2. T. HETEROSTICHUM. Hedw. (Serrated Hoary F.) Spring.
On a wall near West Derby village,—W.S.
 3. T. FASCICULARE. Schrad. (Beardless hoary F.) Spring.
Wet rocky places on Bidston Hill, plentiful, W.H. On walls about West Derby,—W.S. Between Allerton and Garston,—T. Sansom.
 4. T. POLYPHYLLUM. Schwaegr. (*Dicranum polyphyllum*. E.B.) (Many-leaved F.) Spring.
On walls at Bidston, and near the Preston-road Station beyond Walton,—W.S. Between Allerton and Garston, T. Sansom.
 5. T. CANESCENS. Hedw. (Hoary F.) Winter and Spring.
Gateacre,—T. Sansom.
- VAR. b. T. ERICOIDES. Schrad. & E.B.
Bidston Hill,—W.S. Between Allerton and Garston,—T. Sansom.

THE FLORA OF LIVERPOOL.

11. DICRANUM. Hedw. *Fork-Moss*.

A. "*Leaves bifarious.*" (FISSIDENS. Hedw.)

1. D. BRYOIDES. Sw. (Lesser pinnated-leaved F.) Winter.

VAR. a. Hook. FISSIDENS BRYOIDES. Hedw. "Stem short simple, capsule erect."

Very common in shaded wet banks.

VAR. b. Hook. FISSIDENS OSMUNDIOIDES. Hedw. (*F. asplenioides*. Schwaeg.) "Stem elongated, somewhat branched, capsule erect."

VAR. c. Hook. F. TAMARINDIFOLIUS. Brid. "Stem short simple, capsule inclined."

About Gillbrook,—W.S.

2. D. ADIANTOIDES. Sw. (*Fissidens adiantoides*. Hedw.) (Adiantum-like F.) Spring.

Frequent on the sand hills at New Brighton. Also in a swampy place near Thurstaston; fruit rare,—W.S.

3. D. TAXIFOLIUM. Sw. (*Fissidens taxifolius*. Hedw.) (Yew-leaved F.) Winter.

Common in moist woods on the Cheshire side of the Mersey,—W.S.; and not uncommon on the Lancashire side, in similar situations,—W.H. Sefton. Bromboro',—T. Sansom.

B. "*Leaves inserted on all sides of the Stem.*"

4. D. GLAUCUM. Hedw. (White F.) Spring.

Common on wet heaths and in woods. Plentiful on Bidston and Heswall hills,—W.S. Abundant on Simmons-wood Moss. About Stourton,—T. Sansom. Perhaps never found in fruit about Liverpool,—W.H.

5. D. CERVICULATUM. Hedw. (Red-necked F.) Spring.

Railway-bank beyond Broad-Green, rare,—W.H.

6. D. FLEXUOSUM. Hedw. (Zig-zag F.) Winter.

On Simmons-wood Moss, frequent,—W.H. and W.S. In a fir wood at Bidston,—W.S.

THE FLORA OF LIVERPOOL.

VAR. b. NIGRO-VIRIDE. Hook. (*Sphagnum Alpinum*. L.) "Stems elongated blackish-green, leaves often piliferous."

On Simmons-wood Moss,—W.S.

7. D. UNDULATUM. Ehrh. (Wave-leaved F.) Autumn.

Woods near Simmons-wood Moss,—W.H.

8. D. SCOPARIUM. Hedw. (Broom F.) Autumn.

On bogs and heaths, and the sand hills, frequent.

9. D. HETEROMALLUM. Hedw. (Silky-leaved F.) Winter.

On shady dry banks and rocky places, frequent.

10. D. VARIUM. Hedw. (Variable F.) Winter.

VAR. a. VIRIDE. Hook. "Leaves generally pointing in all directions lanceolate green, capsules subcernuous."

On clayey and moist banks, very frequent.

VAR. b. RUFESCENS. Hook. (*D. rufescens*. Turn. and E.B.) "Leaves subsecund lanceolato-subulate reddish, capsules erect."

Moist sandy banks, not unfrequent,—W.H.

12. TORTULA. Hedw. *Screw-Moss*.

1. T. ENERVIS. Hook. & Grev. (*T. rigida*. E.B.) (Nerveless rigid S.) Winter.

Clay banks, frequent,—W.H.

2. T. MURALIS. Hedw. (Wall S.) Spring.

On rocks, old walls, &c., very frequent.

3. T. RURALIS. Ehrh. (Great hairy S.) Spring.

On the sand hills on the shores of the Mersey, frequent; and on old walls inland, occasionally.

4. T. SUBULATA. Hedw. (Awl-shaped S.) Winter.

On shady banks, not unfrequent. On the sand hills on the shores of the Mersey, frequent.

5. T. UNGUICULATA. Hook. & Tay. (Bird's-claw S.) Winter.

Common in brick fields,—W.S. On the Railway bank beyond Broad Green, plentiful,—W.H.

THE FLORA OF LIVERPOOL.

VAR. HUMILIS. Hook. (*T. mucronulata*. E.B.)

Frequent in the same situations as the last.

6. T. TORTUOSA. Hedw. (Frizzled Mountain S.) Summer.

Sand hills near New Brighton,—W.S.

7. T. FALLAX. Sw. (Fallacious S.) Summer.

"A highly variable plant."

Clay banks and gravelly places, frequent.

13. POLYTRICHUM. Linn. *Hair-Moss*.

1. P. UNDULATUM. Hedw. (Wave-leaved H.) Winter.

Moist shady places, frequent.

2. P. FILIFERUM. Schreb. (Brittle-pointed H.) Spring.

Upton, Cheshire,—T. Sansom.

3. P. JUNIPERINUM. Willd. (Juniper-leaved H.) Winter.

Heaths and moors, frequent in Wirral and Lancashire.
On Simmons-wood Moss, abundant,—W.S. Flaybrick Hill. Knowsley. Rainford Moss,—T. Sansom.

4. P. COMMUNE. L. (Common H.) Summer.

Boggy and heathy situations, very frequent.

5. P. GRACILE. Menz. & E.B. Muller, vol. 1., p. 225.

(*P. commune* var. *attenuatum*. Hook.)

Rainford and Wallasey Mosses,—T. Sansom.

6. P. URNIGERUM. Menz. (Urn-bearing H.) Summer.

Quarry at Knowsley,—W.H. Storeton,—T. Sansom.

7. P. ALOIDES. Hedw. (Aloe-like H.) Winter.

Heathy and boggy places, not unfrequent.

8. P. NANUM. Hedw. (Dwarf round-headed H.) Winter.

On bogs and heaths, not unfrequent. On some gravel banks near Wavertree church on the Woolton road,—W.H.

THE FLORA OF LIVERPOOL.

DIV. II. DIPLOPERISTOMI. "Peristome double."

A. "Internal peristome composed of distinct teeth or cilia."

14. FUNARIA. Schreb. *Cord Moss*.

1. F. HYGROMETRICA. Hedw. (Hygrometric C.) Spring.
Old walls, hedge banks, heaths, &c., very frequent.

B. "Inner peristome formed of a membrane more or less divided into laciniae or segments."

15. BRYUM. Linn. *Thread-Moss*.

1. B. ANDROGYNUM. Hedw. (*Mnium andr.* Linn. & E.B.)
(Narrow-leaved T.) Spring.
Sandy hedge-bank near Bootle village, rare,—W.S.
2. B. PALUSTRE. Sw. (Marsh T.) Summer.
Bogs, frequent both in Wirral and Lancashire. On Bidston and Formby Marshes, and on Simmons-wood Moss, abundant,—W.H.
3. B. DEALBATUM. Dicks. (Pale-leaved T.) Summer.
On a damp rock near Bidston Hall,—W.S.
4. B. CARNEUM. L. (Soft-leaved T.) Spring.
On the south bank of the railway between Broad Green and Roby, plentiful,—W.H. Brickfields north of Liverpool,—W.S.
5. B. ARGENTEUM. L. (Silvery T.) Spring.
Very abundant on poor uncultivated land, and on stone walls.
6. B. PALLENS. Sw. (Pale T.) Spring.
On the wall supporting the north side of the railway, about half-way between Broad Green and Roby,—W.H.
7. B. PYRIFORME. Sw. (Pear-fruited T.) Spring.
Not uncommon on pots in Greenhouses,—W.S.
8. B. CAPILLARE. L. (*B. stellare.* E.B.) (Matted T.) Spring.
Common on rocks, walls and gravelly places.

THE FLORA OF LIVERPOOL.

9. *B. CAESPITIUM*. L. (Tufted T.) Spring.
On rocks, walls and gravelly places, very frequent.
VAR. *MINUS*. Hook. *B. BICOLOR*. Turn. & E.B.
(Small tufted T.) Spring.
In similar situations to the last, but not so frequent.
 10. *B. NUTANS*. Schr. (Nodding T.) Spring.
Rainford Moss,—W.S. Plentiful on the south side of
Simmons-wood Moss whence turf has been cut,—W.H.
 11. *B. VENTRICOSUM*. Dicks. (Swelling-fruited T.) Spring.
Abundant in Bebbington woods and on Bidston Marsh,—
W.S. Plentiful in woods in Croxteth Park,—W.H.
 12. *B. ROSEUM*. Schreb. (Rose-like T.) Autumn.
On the sand hills at New Brighton and Bootle, frequent,
—W.S.
 13. *B. LIGULATUM*. Schr. (Strap-leaved T.) Spring.
In moist shady woods and banks, frequent.
 14. *B. PUNCTATUM*. Schreb. (Dotted-leaved T.) Spring.
Bebbington woods, rare,—W.S. In the old quarry at Fir
Grove, West Derby, rare,—W.H.
 15. *B. AFFINE*. Brid. (Creeping T.) Spring.
Plentiful on the sand hills at New Brighton,—W.S.
Plentiful amongst other moss and grass on the top of a
stone-built bank by the side of a lane leading to Gateacre
from Childwall church, from one hundred to three hun-
dred yards from the latter place. Plentiful in the old
quarry at Fir Grove, West Derby,—W.H.
 16. *B. HORNUM*. Schreb. (Swan's-neck Thyme T.) Spring.
Woods and old trees, frequent.
 17. *B. JULACEUM*. Schr. (Slender-branched T.) Winter.
Bidston Hill,—W.S.
16. *BARTRAMIA*. Hedw. *Apple Moss*.
1. *B. POMIFORMIS*. Hedw. (Common A.) Spring.
Dry banks near Aintree race-course,—R. Tudor and T.
Sansom. Lane near Broad Green,—T. Sansom. Rocky
walls about one hundred and fifty yards from Childwall
on the road to Gateacre,—W.H.
 2. *B. ITHYPHYLLA*. Brid. (Straight-leaved A.) Spring.
On a bank in a rocky lane near Lark Hill, West Derby,
plentiful,—W.S.
 3. *B. FONTANA*. Sw. (Fountain A.) Summer.
Frequent on Bidston Marsh,—T. Sansom and W.S.
Simmons-wood Moss,—W.S.

THE FLORA OF LIVERPOOL.

SECT. II. PLEUROCARPI. "Seta or fruit-stalk lateral."

DIV. DIPLOPERISTOMI. "Peristome double."

"Inner peristome composed of cilia united below into a membrane,
or connected by transverse bars." Hooker.

17. FONTINALIS. Linn. *Water-Moss*.

1. F. ANTIPYRETICA. L. (Greater W.) Summer.

Streams, ditches, &c., frequent, in Wirral and Lancashire.
Fazakerley,—W.H. Bebbington. Club Moor,—T. Sansom.
Canal at Bootle, &c.

18. HOOKERIA. Sm. *Hookeria*.

1. H. LUCENS. Sm. (Shining H.) Spring.

Woods about Bebbington, plentiful,—W.S.

19. LESKEA. Ehrh. *Leskea*.

1. L. DENDROIDES. Hedw. (*Hypnum dendroides*. L.) (Tree-
like Feather-Moss or L.) Autumn.

On the sand hills and sandy hedge-banks on both sides of
the Mersey, frequent.

20. HYPNUM. Linn. *Feather-Moss*.

1. H. COMPLANATUM. L. (Flat F.) Spring.

By the side of a lane near Storeton, abundant,—W.S.
Eastham wood,—T. Sansom.

2. H. RIPARIUM. L. (Short-beaked Water F.) Summer.

Amongst the aquatic plants in the pond in the Botanic
Garden, abundant,—W.H.

3. H. UNDULATUM. L. (Waved F.) Spring.

By the side of a sandy lane near Simmons-wood Moss,
abundant,—W.S. In a large boggy wood by the side of
the Liverpool road, about half a mile on this side of
Gateacre, abundant,—W.H. Eastham wood,—T. Sansom.

4. H. DENTICULATUM. L. (Fern-like F.) Spring.

Moist shady places, frequent.

THE FLORA OF LIVERPOOL.

VAR. OBTUSIFOLIUM. Hook. "Leaves ovate more or less obtuse, slightly concave."

By the side of a rocky lane near Lark Hill, West Derby, W.S. Plentiful on a hedge bank near the "New Hut," Hale,—W.H.

5. H. MEDIUM. Dicks. (Long-headed F.) Spring.
On trees in woods about Bebbington, rare,—W.S.
6. H. SERPENS. L. & E.B. (*H. subtile*. E.B.) (White-veiled F.) Spring.
On a damp rock by the road side in Storeton village, abundant,—W.S. Abundant on some willows in an osiery near the south side of Croxteth Park,—W.H.
7. H. POPULEUM. Hedw. (*H. implexum*. Sw. & E.B.) (Matted F.) Spring.
On walls, stones, and the trunks of trees, very frequent.
8. H. MURALE. Hedw. (Wall F.) Autumn.
Common on walls and rocky places.
9. H. PURUM. L. (Neat Meadow F.) Winter.
In woods and damp shady places, frequent.
10. H. SCHREBERI. Willd. (Schreber's F.) Autumn.
On the sand hills at Crosby, not unfrequent,—W.H. and W.S.
11. H. FLUITANS. L. (Floating F.) Summer.
Rainford Moss. Plentiful in wet places amongst the sand hills at Crosby,—W.S.
12. H. PLUMOSUM. L. (Rusty F.) Autumn.
On moist rocks and walls, occasionally.
13. H. LUTESCENS. Huds. (Yellow F.) Spring.
On the sand hills at New Brighton and Crosby, frequent,—W.S.
14. H. ALBICANS. Neck. (Whitish F.) Winter.
On New Brighton, Crosby, and Formby sand hills, frequent.
15. H. ALOPECURUM. L. (Fox-tail F.) Spring.
By the side of a well at Lower Bebbington. By the side of a lane at Storeton, plentiful,—W.S.
16. H. CURVATUM. Sw. (Curved F.) Spring.
On a bank by the side of the lane between New Brighton and Leasowe,—W.S. Eastham. Litherland,—T.Sansom.

THE FLORA OF LIVERPOOL.

17. *H. MYOSUROIDES*. L. (Mouse-tail F.) Autumn.
Some trees in Bebbington woods, abundant,—W.S. Abundant on the trunks of some large trees in the "Little Wood," Croxteth Park,—W.H.
18. *H. SPLENDENS*. Hedw. (Glittering F.) Spring.
On the sand hills at New Brighton and Crosby, abundant.
19. *H. PROLIFERUM*. L. & E.B. (*H. recognitum*. Hedw. & E.B.)
In woods and shady places where the soil is inclined to be boggy, very frequent. It is rarely found bearing fruit.
20. *H. PRÆLONGUM*. L. (Long F.) Winter.
Wet shady places, growing on banks on the trunks of trees, frequent.
21. *H. RUTABULUM*. L. (Rough-stalked F.) Winter.
On walls, banks, and the trunks of trees, very frequent.
22. *H. VELUTINUM*. L. (Velvet F.) Spring.
On the north bank of the Railway, a little beyond Broad Green, plentiful,—W.H. About Litherland, frequent,—R. Tudor.
23. *H. RUSCIFOLIUM*. Neck. (Long-beaked Water F.) Spring.
In streams in Bebbington woods, abundant,—W.S.
24. *H. CONFERTUM*. Dicks & E.B. (*H. serrulatum*. Hedw. and E.B.) (Clustered F.) Spring.
Bank of Railway near Roby,—W.H.
25. *H. MEGAPOLITANUM*. Wilson. (Megapolitan F.) Spring.
Crosby sand hills, near the Warren House,—W.H.
26. *H. CUSPIDATUM*. L. (Pointed F.) Spring.
Wet grassy places, frequent.
27. *H. STELLATUM*. Schreb. (Yellow starry F.) Spring.
VAR. MINUS. Hook. (*H. squarulosum*. E.B.)
On Rainford Moss,—W.S.
28. *H. CORDIFOLIUM*. Hedw. (Heart-leaved F.) Spring.
On Formby Marsh, plentiful. In a pit by the side of the road between Great Crosby and Sefton,—W.S.
29. *H. TRIQUETRUM*. L. (Three-cornered F.) Winter.
In woods inland, and on the sand hills on the shores of the Mersey, frequent.
30. *H. SQUARROSUM*. L. (Drooping-leaved F.) Winter.
In woods, on heaths and uncultivated ground, frequent.

THE FLORA OF LIVERPOOL.

31. *H. FILICINUM*. L. (Fern-leaved F.) Spring.
In a stream of water at the bottom of the Railway cutting,
Olive Mount, rare,—W.H.
32. *H. KNEIFFIANUM*. Schimp. (Kneiff's F.) Summer.
In a wet part of the old quarry at Fir Grove, West Derby,
—W.H.
33. *H. COMMUTATUM*. Hedw. (Curled Fern F.) Spring.
On Bidston Marsh, and on a clay bank near the Railway
at Bebbington, plentiful,—W.S.
34. *H. CUPRESSIFORME*. L. (Cypress-leaved F.) Winter.
VAR. a. *VULGARE*. Hook. *H. NIGRO-VIRIDE*. Dicks
and E.B. "Stem broad subcylindrical, leaves
falcato-secund."
Woods and shady places, and on Crosby sand hills, frequent.
VAR. b. *COMPRESSUM*. Hook. *H. COMPRESSUM*. L.
Woods, not unfrequent.
35. *H. MOLLUSCUM*. Hedw. (Plumy-crested F.) Winter.
On a clay bank near Bromboro' Pool, abundant,—W.S.

SUB-CLASS II. THALLOGENÆ, OR
CELLULARES.

ORD. CI. CHARACEÆ. Rich. *The Chara Family.*

1. CHARA. Vaill. *Chara. Monand. Monogyn.* L.

1. *C. TRANSLUCENS*. Pers. (*Nitella translucens*. Agard.)
(Translucent C.) June, July. ☉
In some large ponds on the way to Allerton,—J.S. in *Herb.*
In pits on Mr. Clegg's grounds at Allerton,—Mr. H.
Shepherd, in *Hall's Flora*.
2. *C. FLEXILIS*. L. (*Nitella flexilis*. Agard.) (Flaccid C.)
April—August. ☉
In ponds in Wirral, and near Bootle and Crosby, not un-
frequent.
3. *C. VULGARIS*. L. (Common C.) July. ☉
In ponds and wet places, frequent. Very abundant in wet
places on Crosby sand hills.

THE FLORA OF LIVERPOOL.

4. *C. HEDGWIGHII*. Ag. (Hedgwigian C.) June. ☉

In ponds in Wirral, not unfrequent.

5. *C. HISPIDA*. L. (Hispid C.) July, August. ☉

VAR. a. MAJOR. Hook. "Larger, stems spinulose."

Mock-beggar (Leasowe), J.S. in *Herb.* Fazakerley,—
R. Tudor.

VAR. b. GRACILIS. Hook. "Smaller, spinules
obsolete."

Southport.—Mr. W. Wilson, in *Hooker's Eng. Flora*.
Occasionally in Wirral.

ADDENDA AND CORRIGENDA.

Page.

3. Preface.—Line 12 from top, and at page 16 last line, for "Wm. Skellorne," read "W. Skellon."
3. „ Line 4 from bottom, after "Nuttall," add "Messrs. T. C. Archer, F. P. Marrat, Dr. Nevins."
20. Last line but one, and in all similar cases, add after "H. C. Watson,"—"in *Hall's Flora*."
38. After line 3 from top, add, "G. LUCIDUM. L. (Shining C.) May—Aug. ☉ In a lane between Walton and Clubmoor, plentiful,—F. P. Marrat."
39. Line 6 from top, for "xliv" read "xlii," and in the following line, for "xxxvii" read "xxxv."
40. Line 12 from bottom, for "SAROTHANMUS" read "SAROTHAMNUS."
44. Line 4 from bottom, insert "July, Aug. 24 "
45. Line 6 from top, for "XXIV" read "XXII." N.B. In all subsequent orders, subtract two from the number, to correct an error.
72. Line 16 from top, after "C. VULGARIS" add "June. ♂ "
75. After "P. VULGARIS, &c.," add "Ap., May, before the leaves. 24 "
98. After "S. SPATH., &c.," add "Aug. 24 "
140. After places, in line 4 from bottom, add "Plentiful on an old wall about a quarter of a mile north of Billinge Quarry,—W.S."

INDEX

TO THE

NATURAL FAMILIES.

Order.	Page.	Order.	Page.
1 Ranunculaceæ	17	53 Boraginaceæ.....	83
2 Berberidaceæ	20	54 Solanaceæ.....	85
3 Nyphæaceæ	20	55 Orobanchaceæ	86
4 Papaveraceæ	21	56 Scrophulariaceæ	86
5 Fumariaceæ	21	57 Labiatae.....	90
6 Cruciferae	22	58 Verbenaceæ	95
7 Resedaceæ	28	59 Lentibulariaceæ	95
8 Violaceæ	28	60 Primulaceæ	96
9 Droseraceæ	29	61 Plumbaginaceæ	98
10 Polygalaceæ.....	30	62 Plantaginaceæ	99
11 Caryophyllaceæ	31	63 Chenopodiaceæ	100
12 Linaceæ	34	64 Scleranthaceæ	102
13 Malvaceæ	35	65 Polygonaceæ	103
14 Tiliaceæ	35	66 Thymelaceæ.....	105
15 Hypericaceæ	36	67 Euphorbiaceæ	105
16 Aceraceæ	37	68 Callitrichaceæ	106
17 Geraniaceæ	37	69 Ceratophyllaceæ	106
18 Oxalidaceæ	38	70 Urticaceæ	107
19 Celastraceæ	39	71 Ulmaceæ	108
20 Rhamnaceæ	39	72 Myricaceæ	109
21 Leguminosæ	21	73 Betulaceæ.....	109
24 Rosaceæ	45	74 Salicaceæ	110
25 Onagraceæ	52	75 Cupuliferae	112
26 Haloragaceæ	53	76 Coniferae	113
27 Lythraceæ	53	77 Hydrocharidaceæ.....	114
28 Cucurbitaceæ	54	78 Orchidaceæ	115
29 Portulacæ	54	79 Iridaceæ	117
30 Paronychiaceæ.....	54	80 Amaryllidaceæ	117
31 Crassulaceæ	55	81 Dioscoreaceæ	117
32 Grossulariaceæ	56	82 Trilliaceæ	118
33 Saxifragaceæ	56	83 Liliaceæ	118
34 Umbelliferae	57	84 Juncaceæ	119
35 Araliaceæ	63	85 Butomaceæ	121
36 Cornaceæ	63	86 Alismaceæ.....	121
37 Loranthaceæ	63	87 Juncaginaceæ	122
38 Caprifoliaceæ	64	88 Typhaceæ	122
39 Rubiaceæ	65	89 Araceæ	123
40 Valerianaceæ	66	90 Pistiaceæ	123
41 Dipsaceæ	67	91 Naiadaceæ	124
42 Compositæ	67	92 Cyperaceæ	126
43 Campanulaceæ.....	78	93 Graminaceæ.....	131
44 Vacciniaceæ	78	94 Polypodiaceæ	140
45 Ericaceæ	79	95 Osmundaceæ	143
46 Pyrolaceæ	80	96 Ophioglossaceæ	144
47 Monotropaceæ	80	97 Lycopodiaceæ	144
48 Aquifoliaceæ.....	80	98 Marsileaceæ	145
49 Oleaceæ.....	80	99 Equisetaceæ.....	145
50 Apocynaceæ	81	100 Musci	147
51 Gentianaceæ.....	81	101 Characeæ	160
52 Convolvulaceæ	83		

ALPHABETICAL INDEX

TO THE

FAMILIES AND GENERA.

	Page.		Page.
ACERACEÆ	87	Arctium	71
Acer	37	Arenaria	33
Achillæa	77	Armeria	98
ACOTYLEDONÆ	140	Armoracia	23
ACROGENÆ	140	Arrhenatherum.....	134
Adonis	18	Artemisia	73
Adoxa	63	Arum	123
Ægopodium	58	ASPARAGÆÆ.....	118
Æthusa	60	Arundo	138
Agraphis.....	118	Asparagus	118
Agrimonia	49	Asperula	66
Agrostemma	31	Aspidium	141
Agrostis	133	Asplenium	142
Aira	133	Aster	75
Ajuga	92	Atriplex	101
AJUGOIDEÆ	92	ATRIPLICEÆ	101
Alchemilla	48	Avena	138
Alisma	121	Ballota	92
ALISMACEÆ	121	Barbarea	22
Alliaria	25	Bartramia	155
Allium	119	Bartsia	87
Alnus	109	Bellis	76
Alopecurus	131	BERBERIDACEÆ	20
ALSINEÆ	32	Berberis	21
Althæa	35	Betonica.....	93
AMARYLLIDACEÆ	117	BETULACEÆ.....	109
AMENTACEÆ	107—112	Betula	109
Ammophila	133	Bidens	73
AMYGDALÆÆ	45	Blechnum	143
Anagallis	97	Blysmus	126
ANAGALLIDEÆ	97	BORAGINACEÆ	83
Anchusa	84	Botrychium	144
Andromeda.....	79	Brachypodium	139
Anemone	18	Brassica	27
Angelica	60	Briza	135
Anthemis	77	Bromus	137
Anthoxanthum	131	Bryonia	54
Anthriscus	62	Bryum	154
Anthyllis.....	41	Bunium	58
Antirrhinum	88	Bupleurum.....	59
Apargia	68	BUTOMACEÆ	121
Apium	57	Butomus.....	121
APOCYNACEÆ	81	Cakile	24
AQUIFOLIACEÆ	80	Calamagrostis	132
Aquilegia	20	Calamintha	94
Arabis	23	CALLITRICHACEÆ	106
ARACEÆ	123	Callitriche	106
ARALIACEÆ	63	Calluna	79

INDEX.

	Page.		Page.
Caltha.....	19	Cratægus	50
Calystegia	83	Crepis	69
CALYCIFLORÆ	89	Crithmum	60
Campanula	78	CRUCIFERÆ	22
CAMPANULACEÆ	78	CUCURBITACEÆ	54
CANNABINÆ	107	CUPULIFERÆ	112
CAPRIFOLIACEÆ	64	Cuscuta	83
Capsella	26	CYCLOLOBÆ	100
Cardamine	23	CYNAROCEPHALÆ	71
Carduus	71	Cynoglossum	85
Carex	128	Cynosurus	135
Carlina	72	CYPERACEÆ	126
Carpinus	113	<i>Cytisus</i>	40
Carum	58	Dactylis	135
CARYOPHYLLACEÆ	30	Daphne	105
Castanea	112	Datura	85
Catabrosa	133	Daucus	62
CELASTRACEÆ	39	Dianthus	30
CELLULARES	140, 160	DICOTYLEDONÆ	17
Centaurea	72	Dicranum	151
Centranthus	66	Didymodon	160
Cerastium	34	Digitalis	89
CERATOPHYLLACEÆ	106	DIOSCOREACEÆ	117
Ceratophyllum	106	DIPSACEÆ	67
Ceterach	140	Dipsacus	67
Charophyllum	62	Draba	24
Chara	160	Drosera	29
CHARACEÆ	160	DROSERACEÆ	29
Chelidonium	21	DROSERÆ	29
CHENOPODIACEÆ	100	Echinophora	62
CHENOPODEÆ	100	Echium	83
Chenopodium	100	Eleocharis	126
Chlora	82	Elymus	138
Chrysanthemum	76	Encalypta	149
Chrysosplenium	57	ENDOGENÆ	114
CICHORACEÆ	67	Epilobium	25
Cichorium	70	Epipactis	115
Circæa	52	EQUISETACEÆ	145
Clematis	17	Equisetum	145
<i>Clinopodium</i>	94	Erica	79
Cnicus	71	ERICACEÆ	79
Cochlearia	24	Erigeron	75
Comarum	48	Eriophorum	127
COMPOSITÆ	67	Erodium	38
CONIFERÆ	113	<i>Errum</i>	44
Conium	61	Eryngium	57
Convallaria	118	Erysimum	25
CONVOLVULACEÆ	83	Erythræa	81
Convolvulus	83	Euonymus	39
CORMOGENÆ	140	Eupatorium	74
CORNACEÆ	63	Euphorbia	105
Cornus	63	EUPHORBIACEÆ	105
COROLLIFLORÆ	79	Euphrasia	87
<i>Coronopus</i>	26	EXOGENÆ	17
Corydalis	22	Fagus	112
Corylus	112	Fedia	66
CORYMBIFERÆ	73	Festuca	135
Cotyledon	55	Filago	74
CRASSULACEÆ	55	FILICES	140

INDEX.

	Page.		Page.
Fissidens	151	Isolepis	127
Feniculum.....	60	Jasione	78
Fontinalis	156	JUNCACEÆ	119
Fragaria	47	JUNCAGINACEÆ	122
Fraxinus.....	81	Juncus	119
Fumaria	21	Knautia	67
FUMARIACEÆ	21	Koniga	24
Funaria	154	LABIATÆ	90
Galanthus	117	Lactuca	68
Galeopsis	92	Lamium	93
Galium	65	Lapsana	70
Genista	40	Lathyrus.....	44
GENISTEÆ	40	LEGUMINOSÆ	40
Gentiana	82	Lemna	123
GENTIANEÆ	81	LENTIBULARIACEÆ	95
GENTIANACEÆ	81	Leontodon	69
GERANIACEÆ	37	Leonurus	92
Geranium	37	Lepidium	26
Geum	46	Lepturus	130
Glaucium	21	Leskea	156
Glaux	96	Ligustrum	80
Glechoma	94	LILIACEÆ	118
GLUMACEÆ	126	Linaria	89
Gnaphalium	74	LINACEÆ	84
GRAMINACEÆ	131	Linum.....	84
Grimmia.....	150	Listera	115
GROSSULARIACEÆ	56	Lithospermum	84
Gymnostomum	148	Littorella	99
Gymnadenia	116	Lolium	139
Habenaria	116	Lonicera	64
HALORAGACEÆ	53	Lotus	43
Hedera	63	Luzula	120
HEDYSAREÆ	43	Lychnis	31
Helminthia	68	LYCOPODIACEÆ	144
Helosciadium	57	Lycopodium	144
Heracleum.....	61	Lycopsis	85
Herniaria	54	Lycopus	90
Hesperis	25	Lysimachia.....	97
Hieracium	70	LYTHRACEÆ	53
Hippuris.....	53	Lythrum	53
Holcus	134	Malva	35
Honekenya.....	32	MALVACEÆ	35
Hookeria	156	Marrubium	94
Hordeum	138	MARSILEACEÆ	145
Hottonia.....	96	Matricaria	77
HOTTONIÆ	96	Medicago	41
Humulus	107	Melampyrum	89
Hyacinthus	118	Melica.....	134
HYDROCHARIDACEÆ	114	Melilotus	41
Hydrocharis	114	Mentha	90
Hydrocotyle	57	MENTHODEÆ	90
Hyoscyamus	85	MENYANTHACEÆ	62
HYPERICACEÆ	36	Menyanthes	82
Hypericum.....	36	Mercurialis.....	106
Hypnum	156	Milium	132
Hypochoeris	68	Moenchia	33
Ilex	80	Molinia	132
IRIDACEÆ	117	MONOCHLAMYDEÆ	100
Iris	117	MONOCOTYLEDONÆ	114

INDEX.

	Page.		Page.
Monotropa	80	Pinus	113
MONOTROPACEÆ	80	PISTIACEÆ	123
Montia	54	PLANTAGINACEÆ	99
MUSCI	147	Plantago	99
Myosotis	84	PLUMBAGINACEÆ	98
MYRICACEÆ	109	Poa	134
Myrica	109	Polygala	30
Myriophyllum	53	POLYGALACEÆ	30
NAIADACEÆ	124	POLYGONACEÆ	103
Narcissus	117	Polygonum	103
Nardus	131	POLYPODIACEÆ	140
Narthecium	121	POLYPODIEÆ	140
Nasturtium	23	Polypodium	140
Neottia	115	Polytrichum	153
Nepeta	93	Populus	111
NEPETEÆ	92	PORTULACEÆ	54
Nuphar	20	Potamogeton	124
Nymphaea	20	Potentilla	48
NYMPLIEACEÆ	20	POTENTILLIDÆ	48
Oenanthe	59	Poterium	49
Oenothera	52	<i>Prenanthes</i>	68
OLEACEÆ	80	Primula	96
ONOGRACEÆ	52	PRIMULACEÆ	96
Ononis	41	PRIMULEÆ	96
Onopordum	72	Prunella	94
OPHIOGLOSSACEÆ	144	Prunus	45
Ophioglossum	144	Pteris	142
ORCHIDACEÆ	115	Pulicaria	76
Orchis	116	<i>Pyrethrum</i>	77
Origanum	91	Pyrola	80
Ornithogalum	119	PYROLACEÆ	80
Ornithopus	43	Pyrus	51
OROBANCHACEÆ	86	Quercus	112
Orobanche	86	Radiola	35
Orobis	45	RANUNCULACEÆ	17
OSMUNDACEÆ	143	Ranunculus	17
Osmunda	143	Raphanus	27
OXALIDACEÆ	38	Reseda	28
Oxalis	38	RESEDACEÆ	28
PAPAVERACEÆ	21	RHAMNACEÆ	39
Papaver	21	Rhamnus	39
Parietaria	107	Rhinanthus	86
Paris	118	Rhynchospora	126
Parnassia	30	Ribes	56
PARNASSIÆ	30	Rosa	49
PARONYCHIACEÆ	54	ROSACEÆ	45
Pastinaca	61	ROSEÆ	46
Pedicularis	88	ROSIDÆ	49
Peplis	53	<i>Rottboellia</i>	139
PETALOIDEÆ	114	RUBIACEÆ	65
Petasites	75	Rubus	47
Peucedanum	61	Rumex	104
Phalaris	132	Ruppia	125
Phascum	147	Sagina	82
Phleum	132	Salicornia	101
Phragmites	136	SALICACEÆ	110
Phlularia	145	Salex	110
Pimpinella	58	Salvia	90
Pinguicula	95	Sambucus	64

INDEX.

	Page.		Page.
SAMOLEÆ	98	Symphytum	85
Samolus	98	Tamus	117
Sanguisorba	49	Tanacetum	73
SANGUISORBIDÆ	48	Taxus	113
Sanicula	57	Teesdalia	24
Saponaria	30	Tetraphis	149
Sarothamnus	40	Teucrium	92
SATUREINÆ	91	THALAMIFLORÆ	17
Saxifraga	56	Thalictrum	17
SAXIFRAGACEÆ	56	THALLOGENÆ	160
Scabiosa	67	Thlaspi	24
Scandix	61	Thrinchia	68
Schoenus	126	THYMELACEÆ	105
Scilla	118	Thymus	91
SCILLEÆ	118	Tilia	35
Scirpus	127	TILIACEÆ	35
SCLERANTHACEÆ	102	Torilis	62
Scleranthus	102	Tormentilla	48
Scolopendrium	142	Tortula	152
Scrophularia	88	Tragopogon	67
SCROPHULARIACEÆ	86	Trichostomum	150
Scutellaria	94	TRIFOLIÆ	41
Sedum	55	Trifolium	42
Sempervivum	55	Triglochin	122
Senebiera	26	Trigonella	42
Senecio	76	TRILLIACEÆ	118
Serratula	71	Triodia	135
Sherardia	65	Triticum	138
Silaus	60	Turritis	22
Silene	31	Tussilago	75
SILENÆ	30	Typha	122
Sinapis	27	TYPHACEÆ	122
Sison	58	Ulex	40
Sisymbrium	25	ULMACEÆ	108
Sium	59	Ulmus	108
Smyrnium	61	UMBELLIFERÆ	57
SODEÆ	102	Urtica	107
SOLANACEÆ	85	URTICACEÆ	107
Solanum	86	Utricularia	95
Solidago	75	VACCINIACEÆ	78
Sonchus	69	Vaccinium	78
Sparganium	123	Valeriana	66
Spartium	40	VALERIANACEÆ	66
Spergula	32	Verbascum	89
Spergularia	32	Verbena	95
Sphagnum	147	VERBENACEÆ	95
Spiræa	46	Veronica	86
SPIREIDÆ	46	Viburnum	64
SPIROLOBÆÆ	102	Vicia	44
Splachnum	149	VICIÆÆ	44
Stachys	98	Vinca	81
Statice	98	Viola	28
Stellaria	33	VIOLACEÆ	28
Stratiotes	115	Viscum	63
Subularia	26	Weissia	149
Sueda	102	Zannichellia	125
Salsola	102	Zostera	125
SUCDEÆ	102		

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